MULTI CONCEPT 2A (MC2A)
TX CHASSIS TZ
(100 Hz, 4:3)

TV

09 /2001

GB Service manual
D Service-Manual
S Serviceanvisning
F Manual de service
I Manuale di servizio

FINLUX

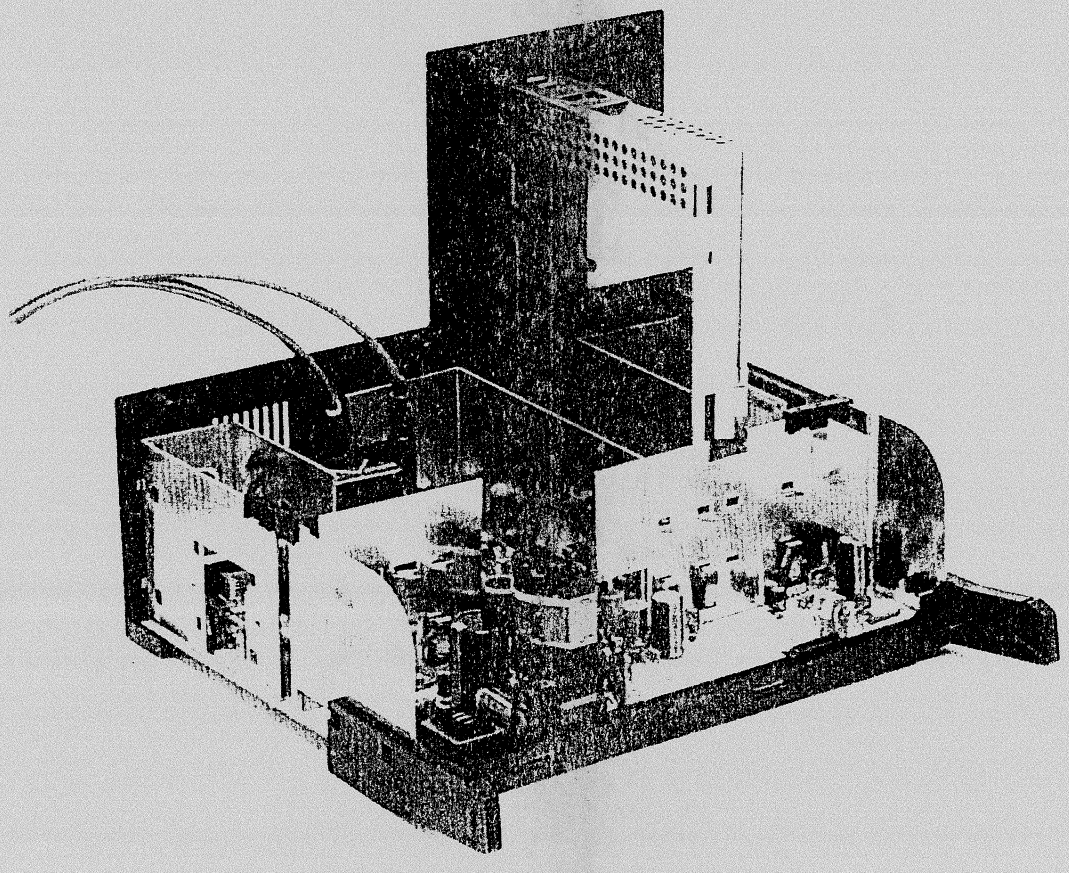
71V100 MC 100 Hz
71V102 MC 100 Hz
74X100 MC 100 Hz
74X110 MC 100 Hz

SALORA

28MC110 100 Hz Champion II
29MC100 100 Hz Gala

LUXOR

70FS10Si



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(GB) Repair instructions

Service and repair work must be performed only in accordance with the existing safety regulations!

Where a high current or a mechanical stress exists solder connections have been strengthened by using eyelets. Such a connection must not be left without an eyelet. Wiring has an effect on safety and EMC (Electro-Magnetic Compatibility). Therefore wires must be maintained in their original positions.

X-RAY REGULATIONS:
The picture tube type and the maximum permissible high-voltage ensure that the X-ray intensity of the receiver remains far below the permissible value. The high-voltage must not exceed the value mentioned on the type label. The high voltage is within the permissible limits when the operating voltage (U1) of the horizontal deflection stage is accurate. Refer to the section "Service adjustments".

ESD Warning
The receiver contains components that are sensitive to electrostatic discharge (ESD). Any servicing or repair work must be done in an environment where the components will not be subjected to ESD. Use a special grounding device!

Surface-Mounted Device (SMD)
SMD's are glued and soldered. In order not to damage the P.C.B e.g. when replacing ICs and similar components with many soldering points, special tools are required when servicing SMD's.

Changes
The manufacturer reserves the right to change the design and specification without prior notice.

(D) Reparatur-Anweisung

Service- und Reparaturarbeiten dürfen nur in Übereinstimmung mit den gültigen Sicherheitsbestimmungen durchgeführt werden!

Bei bestehendem hohen Stromwerten oder mechanischer Beanspruchung müssen Lötverbindungen durch Ösen verstärkt werden. Eine derartige Verbindung darf nicht ohne Öse ausgeführt werden.

Die Verdrahtung hat Einfluß auf die Sicherheit und die elektromagnetische Verträglichkeit. Daher muß die ursprüngliche Anordnung der Verdrahtung erhalten bleiben.

RÖNTGENVERORDNUNG
Der Bildröhrentyp und die maximal zulässige Hochspannung stellen sicher, daß die Intensität der Röntgenstrahlen des Fernsehgerätes weit unter dem zulässigen Wert bleibt. Die Hochspannung darf nicht den auf dem Typenschild befindlichen Wert überschreiten. Die Hochspannung liegt im zulässigen Bereich, wenn die Betriebsspannung (U1) der Horizontal-Ablenkstufe genau eingehalten wird. Siehe auch Abschnitt "Service-Einstellungen".

EGB-Warnung
Das Fernsehgerät enthält Bauteile, die empfindlich auf elektrostatische Entladung reagieren. Alle Service- oder Reparaturarbeiten sind in einer Umgebung durchzuführen, in der die Bauteile nicht elektrostatischer Entladung ausgesetzt sind. Verwenden Sie eine spezielle Erdungsvorrichtung!

SMD-Bauelement
Die SMD's sind geklebt und verlötet. Es sind spezielle Werkzeuge erforderlich, damit bei Austausch von ICs und ähnlichen Bauteilen mit vielen Lötpunkten die Leiterplatte nicht beschädigt wird.

Änderungen
Der Hersteller behält sich das Recht vor, Änderungen in Bauart und Ausführung ohne vorherige Ankündigung durchzuführen.

(S) Reparationsinstruktioner

Service och reparationer måste utföras med hänsyn till gällande säkerhetföreskrifter.

Lödningar som utsätts för höga strömmar eller mekanisk belastning är förstärkta med genomföringshylsor. Dessa anslutningar får inte lämnas utan dessa hylsor.

Kabeldragningen har inverkan på säkerhet och EMC (Elektromagnetisk kompabilitet). Därför måste kablarna monteras i deras originalposition.

RÖNTGENSTRÅLNING:
Bildrörstyp och begränsning av maximum högspänning garanterar att mottagarens röntgenstrålning halls långt under tillåten nivå. Högspänningen får inte överskrida värdet som visas på typetiketten. Högspänningen är inom tillåtna gränser när horisontalavlänkningens drivspänning (U1) är rätt inställd. Se avsnitt "Service-inställningar".

ESD varning
Mottagaren har komponenter som är känsliga för elektrostatisk urladdning (ESD). All servicearbete måste göras så att dessa komponenter inte utsätts för ESD. Använd en speciell jordninganordning.

Ytmonterade komponenter (SMD)
SMD-komponenterna är både limmade och fastlödda. För att inte skada kretskortet när man t.ex. byter IC:n med många lödpunkter bör man använda specialverktyg.

Ändringar
Tillverkaren reserverar rätt till att ändra design och spesifikationer utan skild meddelande.

Ⓕ Instructions de reparation

Les opérations de maintenance et les réparations ne doivent être effectuées qu'en conformité avec les règles de sécurité en vigueur !

Les connexions par soudure doivent être renforcées par des oeillets lorsqu'elles sont soumises à une forte intensité de courant ou à des contraintes mécaniques importantes. Ces connexions doivent toujours être renforcées par ce moyen.

Le câblage est un facteur important pour la sécurité et les perturbations électromagnétiques. En conséquence, maintenez les câbles dans leur position initiale.

REGLEMENTATION RELATIVE AUX RAYONS X :
Votre tube cathodique et la tension maximale autorisée garantissent le maintien des rayons X bien en decà du niveau autorisé. La tension la plus élevée ne doit pas dépasser la valeur indiquée sur la plaquette signalétique de l'appareil. Cette tension reste dans la fourchette autorisée lorsque la tension de service (U1) d'étage de déflexion horizontale est précise. Reportez-vous à la section "Réglages de service".

Avertissement concernant les décharges électrostatiques
Le récepteur contient des composants sensibles aux décharges électrostatiques (DES). Les opérations de maintenance et les réparations doivent être effectuées dans un environnement n'exposant pas les composants à ces décharges. Pour cela, utilisez un dispositif de mise à la terre spécial !

Composants montés en surface (SMD)
Ces composants sont collés et soudés. Pour ne pas endommager les cartes à circuits imprimés, par exemple lors du remplacement de circuits et de composants similaires ayant de nombreux points de soudure, vous devez utiliser des outils spécifiques lorsque vous effectuez la maintenance des appareils montés en surface.

Modifications
Le fabricant se réserve le droit de modifier la conception et les caractéristiques de son produit sans avis préalable.

Ⓘ Istruzioni di servizio

Interventi di assistenza tecnica e riparazione devono essere eseguiti nel più assoluto rispetto delle norme di sicurezza vigenti!

Qualora esistano condizioni di elevati livelli di corrente e stress meccanici le connessioni saldate sono state potenziate tramite occhielli. Questo tipo di connessioni non devono essere lasciate senza occhiello.

Le connessioni influiscono sulla sicurezza e gli standard EMC (Electro-Magnetic Compatibility). Pertanto, i fili elettrici devono essere mantenuti nelle loro posizioni originarie.

NORME SUI RAGGI X:
Il tipo di tubo catodico unitamente all'uso del massimo livello di alta tensione consentito fanno si che l'intensità dei raggi X del ricevitore rimanga molto al di sotto del valore consentito. L'alta tensione non deve superare il valore indicato sull'apposita etichetta. L'alta tensione rientra nei limiti consentiti quando la tensione operativa (U1) del livello di deflessione orizzontale è corretta. Fare riferimento alla sezione "Regolazioni di servizio".

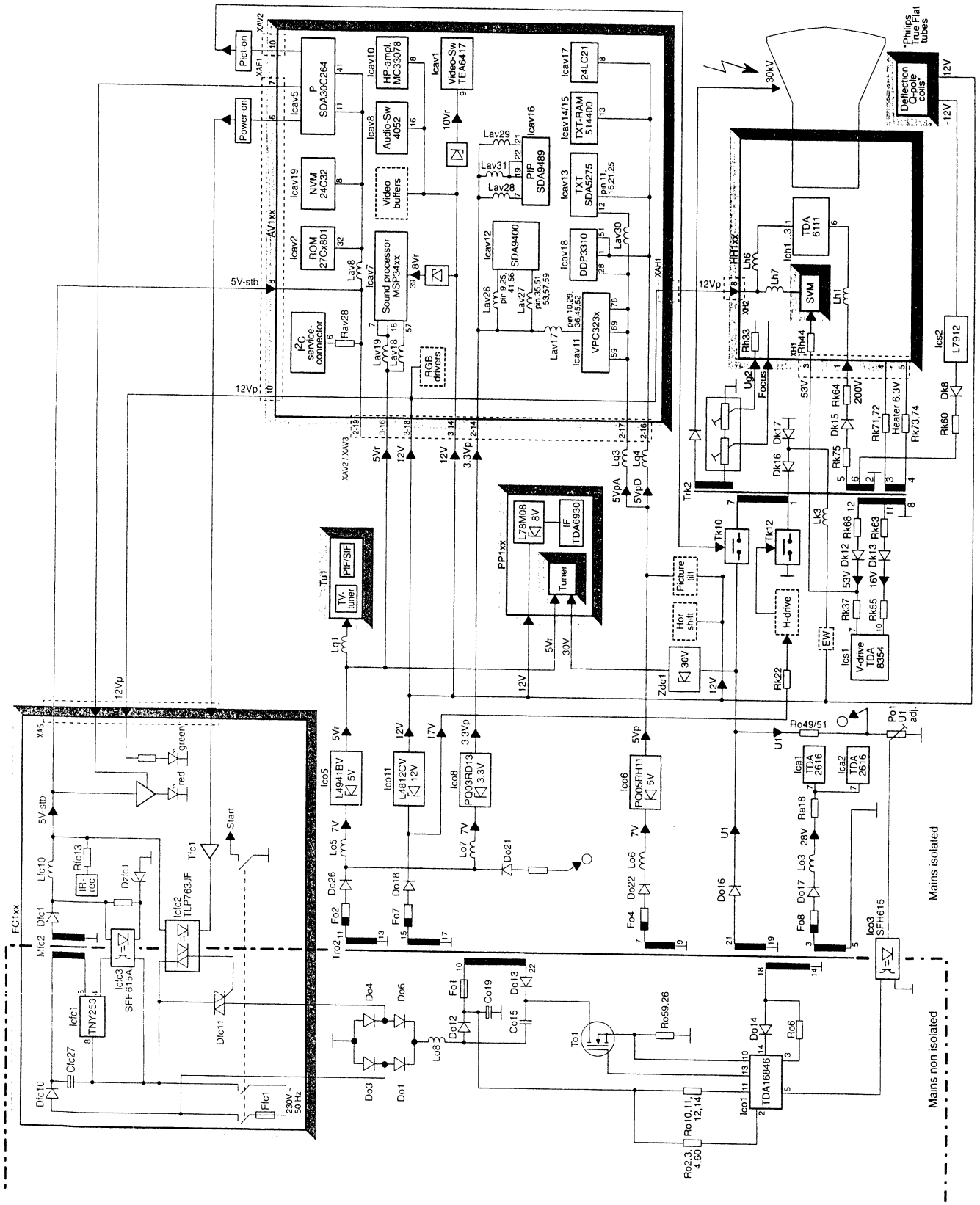
Avvertenza ESD (scariche elettrostatiche)
Il ricevitore contiene componenti sensibili all'elettricità statica. Qualsiasi intervento di assistenza tecnica o riparazione deve essere eseguito in un ambiente in cui i componenti non possano essere soggetti a scariche elettrostatiche (ESD). A tal fine, usare uno specifico dispositivo di messa a terra!

Dispositivi SMD (Surface-Mounted Device)
I dispositivi SMD sono incollati e saldati. Sono necessari strumenti specifici per non danneggiare la scheda PCB quando si sostituiscono circuiti integrati (IC) e simili componenti con molti punti di saldatura.

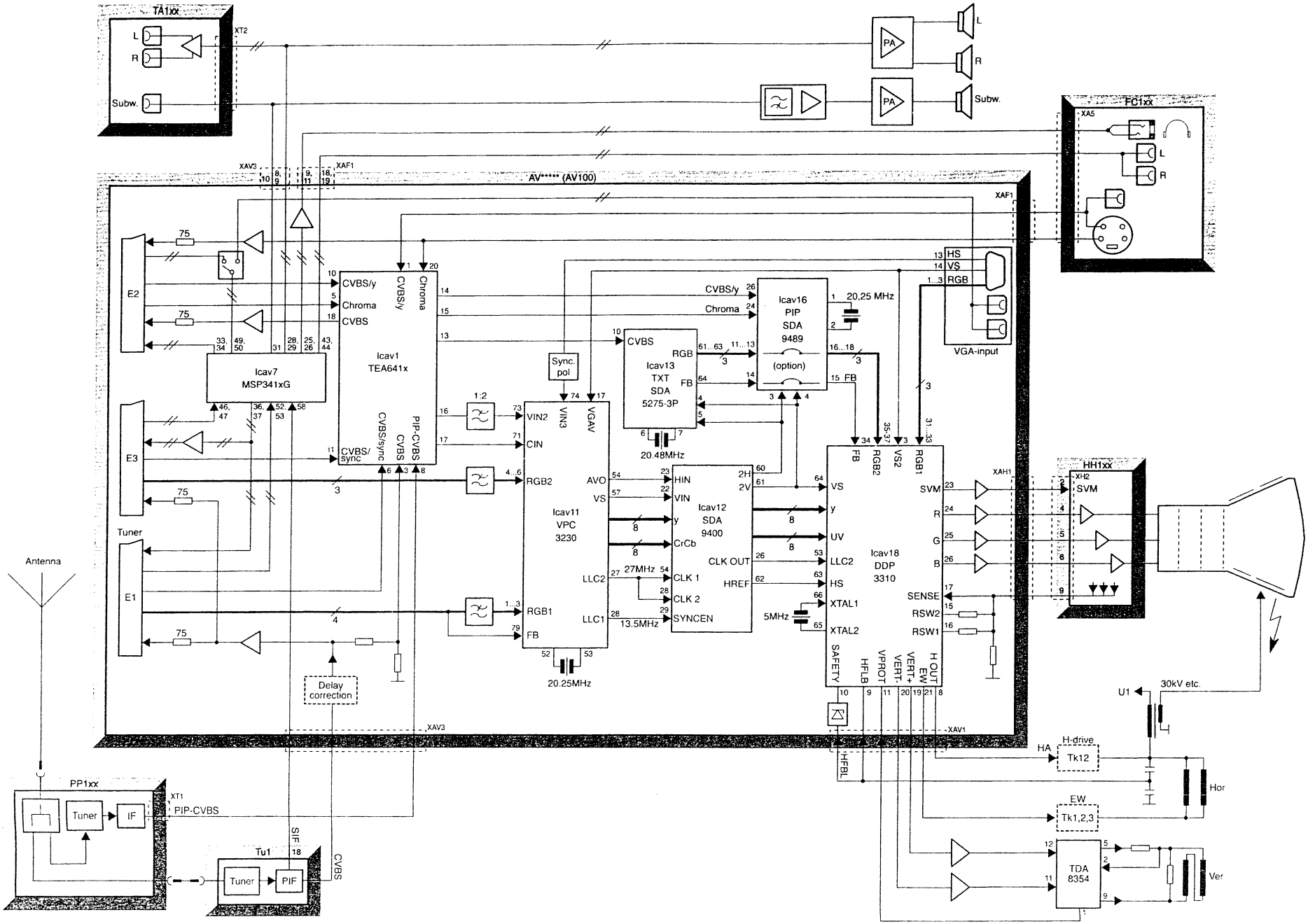
Modifiche
La Casa costruttrice si riserva il diritto di modificare il design e le specifiche senza preavviso.

Technical data	Technische Daten	Tekniska data	Données téchniques	Dati tecnici	
System	**Norm**	**Norm**	**Systéme**	**Sistema**	PAL/SECAM B, G
Multinorm [1]	Multinorm [1]	Multinorm-TV [1]	Téléviseurs multinormes [1]	Televisori multistandard [1]	PAL/SECAM B, G, D, K, K1, L, L', I
NTSC	NTSC	NTSC	NTSC	NTSC	3.58 MHz via scart
					4.43 MHz via RF / scart
Mains power	**Netzanschluß**	**Nätanslutning**	**Alimentation**	**Tensione di alimentazione**	195...264 V, 50 Hz
Consumption [2]	Leistungsaufnahme [2]	Effektförbrukning [2]	Consommation [2]	Consumo energetico [2]	130 W (normal)
In stand-by	In Bereitschaft	I beredskapsläget	En mode veille	In standby	< 1 W
Frequency range	**Frequenzbereich**	**Frekvensområde**	**Gamme de fréquences**	**Campo di frequenza**	48.25...855.25 MHz
Sound output (RMS)	**Tonendstufe (RMS)**	**Ljudeffekt (RMS)**	**Sortie sonore (RMS)**	**Potenza audio (RMS)**	2 x 10 W/8 Ω
Subwoofer [1]	Subwoofer [1]	Subwoofer [1]	Subwoofer [1]	Subwoofer [1]	14 W/16 Ω
Connections on the front panel	**Anschlüsse an der Vorderseite**	**Anslutningar på framsidan**	**Connexions sur le panneau avant**	**Connessioni sul pannello frontale**	
Headphones	Kopfhöreranschluß	Hörlurar	Ecouteurs	Cuffia	32...600 Ω, 3.5 mm
Audio/Video	Audio/Video	Audio/Video	Audio/Vidéo	Audio/Video	Audio in: 0...2 V (RMS)
					Video in: 1 V/75 Ω
					Y/C in (SVHS)
Connections on the rear panel	**Anschlüsse an der Rückseite**	**Anslutningar på baksidan**	**Connexions sur le panneau arrière**	**Connessioni sul pannello posteriore**	
Audio/Video	Audio/Video	Audio/Video	Audio/Vidéo	Audio/Video	Audio in: 0...2 V/R_{IN} = 1 kΩ
					Audio out: 0...2 V/R_L min. 10 kΩ
					Video in/out: 1 V/75 Ω
					RGB in: 0.7 V/75 Ω (E1, E3 [1])
					Y/C in (SVHS) (E2)
Antenna	Antennenanschluß	Antenn	Antenne	Antenna	75 Ω
Audio output	Audio Ausgang	Ljudutgångar	Sortie audio	Uscita audio	
right/left	links/rechts	vänster/höger	gauche/droite	sinistra/destra	0...2 V/10 kΩ (RCA)
subwoofer	subwoofer	subwoofer	subwoofer	subwoofer	0...2 V/10 kΩ 20...180Hz (RMS) (RCA)
VGA input [1]	VGA Eingang [1]	VGA ingång [1]	Entrée VGA [1]	Ingresso VGA [1]	640 x 480 60 Hz
					640 x 400 70 Hz
					640 x 350 70 Hz
					720 x 400 70 Hz
VGA audio input [1]	VGA Audio-Eingang [1]	VGA ljudingång [1]	Entrée audio VGA [1]	Ingresso audio VGA [1]	0...2 V (RMS) (RCA)
Dimensions [3]	**Maße** [3]	**Mått** [3]	**Mesurer** [3]	**Dimensioni** [3]	
(Width x depth x height / weight)	(Weite x Tiefe x Höhe / Gewicht)	(Bredd x djup x höjd / vikt)	(Largeur x profondeur x hauteur / poids)	(Larghezza x profondità x altezza / peso)	
28" B8 4:3	28" B8 4:3	28" B8 4:3	28" B8 4:3	28" B8 4:3	754 x 500 x 565 mm / 33,0 kg
28" V3 4:3	28" V3 4:3	28" V3 4:3	28" V3 4:3	28" V3 4:3	754 x 500 x 565 mm / 33,0 kg
29" X3/X4 4:3	29" X3/X4 4:3	29" X3/X4 4:3	29" X3/X4 4:3	29" X3/X4 4:3	777 x 523 x 607 mm / 47,5 kg
Specifications are subject to change.	**Änderungen vorbehalten**	**Rätt till ändringar förbehålles.**	**Les spécifications peuvent être modifiées sans préavis.**	**Le specifiche sono soggette a cambiamenti.**	
[1] Not in all models.	[1] Nicht in allen Modellen.	[1] Inte i alla modeller.	[1] Pas sur tous les modèles.	[1] Non in tutti i modelli.	
[2] Depends on option modules and picture tube.	[2] Abhängig von Optionsmodulen und Bildröhre.	[2] Varierar beroende på modul-uppsättning och bildrör.	[2] Dépend des modules optionnels et du tube cathodique.	[2] A seconda dei moduli opzione e del tubo catodico.	
[3] Approximately.	[3] Ungefähr.	[3] Cirka.	[3] Approximativement.	[3] Circa.	

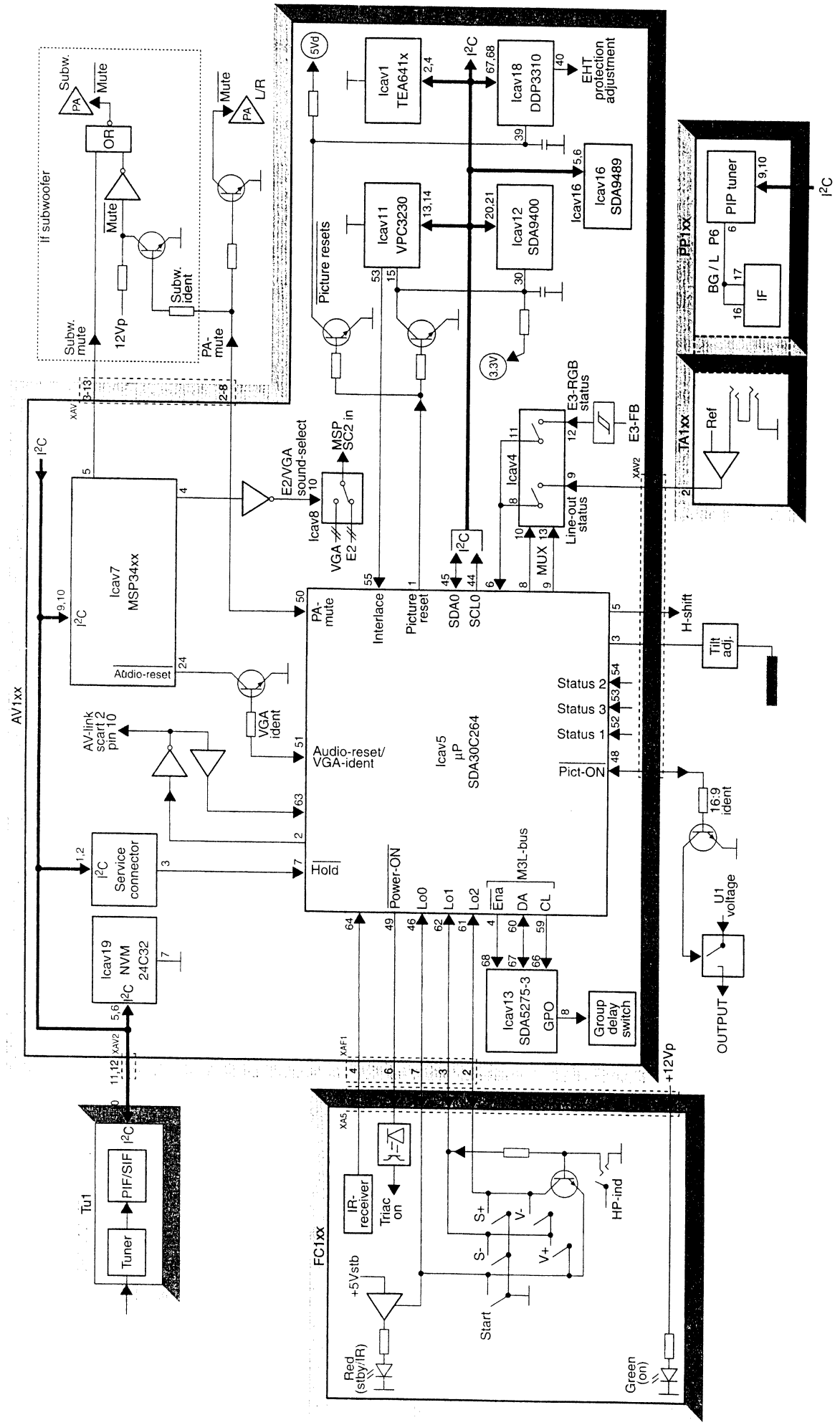
Block diagram, power supply



Block diagram, signal routes

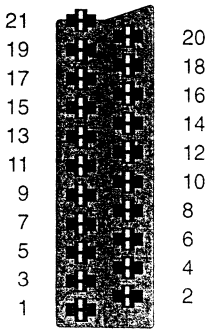


Block diagram, control signals



SCART connector (E1, E2 & E3)

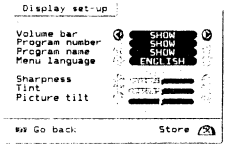
Pin	SCART 1 (E1)	SCART 2 (E2)	SCART 3 (E3, not in all models)
1	Audio out R, 0.5V (RMS)	Audio out R, 0.5V (RMS)	Audio out R, 0.5V (RMS)
2	Audio in R, 0.5V (RMS)	Audio in R, 0.5V (RMS)	Audio in R, 0.5V (RMS)
3	Audio out L, 0.5V (RMS)	Audio out L, 0.5V (RMS)	Audio out L, 0.5V (RMS)
4	Ground, audio	Ground, audio	Ground, audio
5	Ground, blue	Ground	Ground, blue
6	Audio in L, 0.5V (RMS)	Audio in L, 0.5V (RMS)	Audio in L, 0.5V (RMS)
7	RGB input, blue	S-video chrominance out (copy from front AV-connector)	RGB input, blue
8	Switching voltage	Switching voltage	Switching voltage
	0...2V : no function	0...2V : no function	0...2V : no function
	4.5...7V : 16/9 picture ratio	4.5...7V : 16/9 picture ratio	4.5...7V : 16/9 picture ratio
	9.5...12V : normal picture ratio	9.5...12V : normal picture ratio	9.5...12V : normal picture ratio
9	Ground, green	Ground	Ground, green
10	-	AV-link bidirectional control logical 0: max 0.6V logical 1: min 3.7V	-
11	RGB input, green	-	RGB input, green
12	-	-	-
13	Ground, red	S-video ground (chrominance)	Ground, red
14	Ground	Ground	Ground
15	RGB input, red	S-video input (chrominance)	RGB input, red
16	Switching voltage, RGB blanking	-	Switching voltage, RGB blanking
17	Ground, video	Ground, video	Ground, video
18	Ground	Ground	Ground
19	Video out, 1 Vpp/75 Ω	Video out, 1 Vpp/75Ω S-video out (luminance)	Video out, 1 Vpp/75 Ω
20	Video in, 1 Vpp/75 Ω RGB sync in	Video in, 1 Vpp/75 Ω S-video in (luminance)	Video in, 1 Vpp/75 Ω RGB sync in
21	Shield	Shield	Shield



Operating instructions

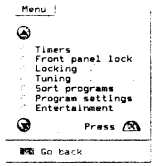
Changing the menu language

1. Press the yellow button to select the Vision menu.
2. Press the red button to select the Display set-up menu.
3. Select "Menu language" with the arrow buttons (up/down) and change the menu language with the arrow buttons (left/right).
4. Press the OK button to store the changes.



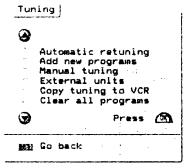
Manual tuning

1. Select the programme number you want to tune.
2. Press the MENU button.
3. Select "Tuning" with the arrow buttons (up/down) and press the OK button.
4. Select "Manual tuning" with the arrow buttons (up/down) and press the OK button.
5. Press the red button (Channel search).
6. Press the OK button to store.
7. Press the TV button to exit.



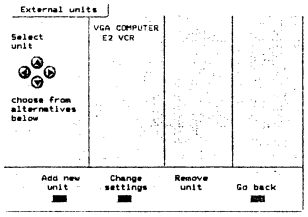
APSi (Automatic Programming System)

1. Press the MENU button.
2. Select "Tuning" with the arrow buttons and press the OK button.
3. Select "Automatic retuning" and press the OK button.
4. To retune the channels, press the red button.
5. Press the TV button to exit.



Selecting VGA input

1. Press the MENU button.
2. Select "Tuning" with the arrow buttons and press the OK button.
3. Select "External units" with the arrow buttons and press the OK button.
4. Select "VGA COMPUTER" with the arrow buttons and press the TV button. (If "VGA COMPUTER" is not included in the list, select "Add new unit" by pressing the red button. Then select "Computer" with the arrow buttons and press the OK button.)



Service adjustments

Service mode activation

The receiver must be switched on or be in stand-by mode when activating the service mode.

1. Keep the ◢- (volume minus) button on **local control unit** pressed and at the same time start entering password: First MENU and then TV with the **remote control**. Release the ◢- button after the TV button has been pressed. If the receiver is in stand-by mode after the password was entered, switch on the receiver by pressing the TV button.
2. Activate the service mode by pressing the i button. The following adjustment menu appears on the screen:

The adjustment number and name, initializing value (left) and adjustment value (right) are shown in the menu.

3. Exit the service mode by pressing the TV button or logout by switching off the receiver with the mains switch.

Note! Service mode activation stays enabled until the receiver is switched off with the mains switch.

Initialization of NVRAM (ICav19)

In case that the NVRAM is replaced, it must be initialized and configured.

1. Switch the receiver to stand-by mode. Keep the ◢- (volume minus) button on local control unit pressed and at the same time start entering password: MENU, TV and i with the remote control. Release ◢- button after the TV button is pressed.
2. Start the initialization by entering the key code: BLUE, 2, 5, 4 and OK. Initializing will take about 20 s. The receiver switches on automatically when the initializing is ready.
3. Activate the service mode by pressing the i button.
4. Press the RED button to pre-configure the receiver, see also chapter "Configuration and fault diagnostics". (check that the automatic configuration results in IIC DEV 1-4 and IF OPT bytes are corresponding to the actual configuration of the receiver).
5. Set manual option bytes (TXT OPT, SYS OPT 1 & 2 and DSP OPT) to correspond to the actual configuration of the receiver. Press the OK button to store the settings.
6. Switch off the receiver by pressing the mains switch.
7. Switch on the receiver by pressing the mains switch and tune one or more tv channels.
8. Activate the service mode and make the necessary service adjustments.
9. Switch off the receiver by pressing the mains switch.

Service adjustments

Configuration and fault diagnosis

The receiver must be configured after adding or removing any options. By pressing the RED button in service mode, the processor checks the configuration of the receiver and shows the settings on the screen. The configuration can be stored by pressing the OK button.

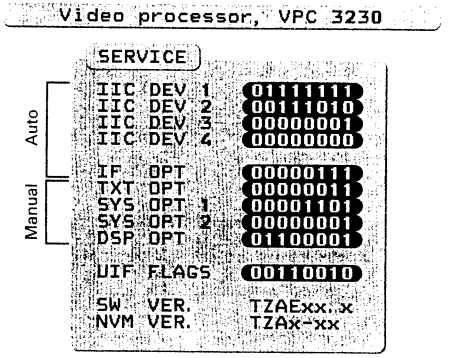
Note! Disconnect Scart 3 and RCA (line out) cables before configuring the receiver.

This feature can also be used in fault diagnosis. If an option bit is not '1' when it should be, the IC (or feature) is either not present or faulty.

Note! IIC DEV 1-4 and IF OPT bytes are configured automatically every time the RED button is pressed. TXT OPT, SYS OPT 1 & 2, DSP OPT and UIF FLAGS bytes must be set manually.

Changing the option bytes

1. Select the configuration mode by pressing the RED button in the service mode.



SW VER. = µP software version.
NVM VER. = NVRAM software version.

2. Select IIC Device byte 1 - 4, Option byte 1 - 5 or Uif flags byte with the arrow buttons (up/down).
3. The name of a responding bit can be seen when using the arrow buttons (up/down and left/right). The selected bit is shown highlighted.
4. Set / clear the bits with the number buttons (0 ... 7).
5. Store the settings by pressing the OK button.
6. Return to the normal service mode by pressing the RED button.

Option byte description

Bit	Description	Setting 7 6 5 4 3 2 1 0	'1'	'0'
	IIC DEV 1	**01101111**		
0	Video processor, VPC 3230		Yes	No
1	Scarabeus, SDA 9400		Yes	No
2	Deflection processor, DDP 3310		Yes	No
3	TV tuner		Yes	No
4	Video switch, TEA6415C		Yes	No
5	Video switch, TDA6417		Yes	No
6	Audio processor, MSP341xG		Yes	No
7	Subwoofer		Yes	No
	IIC DEV 2	**00111010**		
0	Surround audio proc., MSP 3411G		Yes	No
1	Megatext, SDA5275-3		Yes	No
2	4 Mb text memory		Yes	No
3	16 Mb text memory		Yes	No
4	16:9 picture tube		Yes	No
5	VGA connection		Yes	No
6	PIP processor, SDA9489/9589		Yes	No
7	PIP tuner		Yes	No
	IIC DEV 3	**00000001**		
0	Ext 3 installed		Yes	No
1	Lineout module installed		Yes	No
2	DDP F6 or newer		Yes	No
3...7	Free		Yes	No
	IIC DEV 4	**00000000**		
0...7	Free		Yes	No
	IF OPT	**00000000**		
0	B/G IF		Yes	No
1	I IF		Yes	No
2	D/K IF		Yes	No
3	L/L' IF		Yes	No
4	Reserved (Set to 1, not used)		Yes	No
5	Reservation for NTSC M		Yes	No
6...7	Free		Yes	No
	TXT OPT	**00000011**		
0	TOP enabled		Yes	No
1	FLOF enabled		Yes	No
2...4	Free		Yes	No
5	EPG enabled		Yes	No
6	EPG record enabled		Yes	No
7	Free		Yes	No
	SYS OPT 1	**00001101**		
0	A/V connector installed		Yes	No
1	E1 RGB disabled on other programs		Yes	No
2	ACI enabled		Yes	No
3	Carrier mute enabled		Yes	No
4	Loudness enabled		Yes	No
5...7	Free		Yes	No
	SYS OPT 2	**00000001**		
0	Tilt adjustment		Yes	No
1	Start with hotel		Yes	No
2...6	Free		Yes	No
7	Hotel features enabled		Yes	No
	DSP OPT	**00110001**		
0	Subwoofer bit 0		Yes	No
1	Subwoofer bit 1		Yes	No
2	Lineout level Fixed		Yes	No
3	Lineout state virtual		Yes	No
4...7	Free		Yes	No
	UIF FLAGS	**00110010**		
0-2	Logo bit 000 = no logo, go direct to APSi 001 = no logo, go to language menu 011 = Finlux logo 100 = Salora logo 101 = Luxor logo			
3	First time start up		Yes	No
4	Volume bar display ON		Yes	No
5	Program info display ON		Yes	No
6	Front panel lock ON		Yes	No
7	Off timer active		Yes	No

Service adjustments via I²C-bus

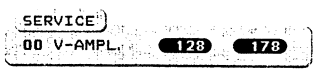
Remote control buttons in service mode
When the receiver is in the service mode you can select the normal TV mode by pressing the TV button and return to the service mode by pressing the i button. The number and the arrow buttons are used for service adjustments. The OK button stores the settings.

Adjustments for different picture formats
Make all adjustments with a PAL signal unless otherwise mentioned. Make 4:3 set adjustments with normal 4:3 (classic) picture format and 16:9 set adjustments with wide (16:9) picture format. Then make the necessary adjustments with other picture formats/signals. The required adjustments are shown in the table below.

Note! Check the configuration of the receiver before making the adjustments and make only the necessary adjustments.

Making the service adjustment
1. Give a two digit code which determines an adjustment (e.g. 04 = width, see the following tables) with the number buttons or select an adjustment stepping with the arrow buttons (up/down).

Note! Power supply and Ug2 adjustments must be done before picture geometry adjustments.



2. Adjust with the cursor buttons (left/right).

3. Store the new value by pressing the OK button.

Note!
- *To avoid incomplete adjustments store each adjustment in the memory immediately after an adjustment has been made.*
- *If an adjustment has to be made separately for different picture format/signal, select first the normal TV mode by pressing the TV button and select then the desired picture format/signal. Return to service mode by pressing the i button.*

Making the picture geometry adjustments
To help the adjustment of geometry with living picture a red border appears around the deflection area of the picture. It can be switched ON/OFF with the MENU-button.

Picture geometry adjustments

Adjustment	Code	OSD name	Classic (4:3)	Progressive scan 50 Hz 4:3	Wide (16:9)	Progressive scan 50 Hz 16:9	VGA 70 Hz	VGA 60 Hz	Note!
Vertical amplitude	00	V-AMPL.	X	X			X	X	
Vertical off-centre shift	01	V-SHIFT	X	X			X	X	
Vertical linearity	02	V-LINEARITY	X	X			X		
Vertical S-correction	03	S-CORR.	X	X			X		
Width	04	WIDTH	X	X			X	X	
Horizontal shift deflection	05	H-SHIFT	X						Adjust deflection to center of screen (only in VGA sets).
Horizontal phase video	06	PHASE	X						
Horizontal blanking	07	HOR BLANK	X						First find the adjustment values where the blanking begins to come over the red area (left/right) and then adjust blanking to the middle of these adjustment values.
Parabola	08	PARABOLA	X	X	X	X	X	X	
Upper corners	09	CORNER UP	X	X			X	X	
Lower corners	10	CORNER LO	X	X			X	X	
Bow	11	BOW	X	X			X		
Trapezium	12	TRAPEZIUM	X	X			X		
Parallelogram distortion	13	ANGLE	X	X			X		

Other adjustments

Adjustment	Code	OSD name	Note!
Screen grid voltage	14	G2 DISP.	Adjust the Ug2 until the display shows 180 ± 20. *Note! Don't press the OK button if only Ug2 adjustment is needed.* If the colour temperature adjustment is needed, start it here by pressing the OK button. This restores the default value of codes 14...19 and locks the reference value (17...19) of the highest gun.
Red gain	15	R GAIN	This procedure is necessary e.g. when the picture tube, CRT-module etc. has been replaced. First adjust the GAIN values (white area to 80 nit) and then REF values (dark area to 1.5 nit). Check then GAIN values again and adjust them again if needed. Adjusting: Pressing the MENU button changes gray-picture / external-picture and pressing the GREEN and the YELLOW button changes the contrast / brightness value.
Green gain	16	G GAIN	
Blue gain	17	B GAIN	
Red reference	18	R REF.	
Green reference	19	G REF.	
Blue reference	20	B REF.	
VPU clock oscillator	21	VCO	This adjustment is automatic, normally just press the OK button to store the value. If display shows 9999, the adjustment couldn't work and a repair is needed. *Note! Use standard 50Hz signal!*
High voltage limitation	22	EHT PROT	Adjust the value upwards until the TV picture becomes blanked. At the same time the value will be decreased automatically with 60 steps. After that press the OK button to store the adjustment.

Variable adjustments

Adjustment	Code	OSD name	Note!
BCL (beam current limitation) threshold	23	BCL THRES	Picture tube related default values are given in separate info (CRT dependant adjustments).
BCL time constant	24	BCL TC	
BCL gain	25	BCL GAIN	
EHT compensation for H-amplitude	26	EHTH	
EHT compensation for H-phase	27	EHTH PHA	
Time constant for H-phase	28	EHTH TC	
EHT compensation for V-amplitude	29	EHTV	
Time constant for H/V-amplitude	30	EHTV TC	
Threshold for H/V-amplitude EHT corr.	31	EHT THRES	
Vertical compens. with higher beam currents	32	EHTV2	
H-compensation with higher beam currents	33	EHTH2	
Peak white limitation	34	Y MAX	
2nd upper corners	35	CORN 2 UP	
2nd lower corners	36	CORN 2 LO	

DDP3310B-F6

Service adjustments

O Power supply block

Supply voltage and protection circuit

1. Set the brightness and the contrast to the normal level. Connect a universal voltmeter to the cathode of **Do16**.

2. Adjust the **U1 voltage** with **Po1**. The voltage depends on the picture tube type, refer to the section "Variable components".

3. Check the power overload protection after making any service operations in the primary circuit of the power supply. Switch off the receiver by pressing the mains button. Short circuit the capacitor **Co36** and keep the short circuit connected. Switch on the receiver by pressing the mains button. When the power overload protection works correctly, the power supply does not start (but tries to start). Switch off the receiver by pressing the mains button. Remove the short circuit and then switch on the receiver by pressing the mains button.

Safety features

Activation of the service mode disables the following features:

- Horizontal safety function (EHT)
- Start-up checking: Video processor **VPC 3230**, Scarabeus **SDA 9400** and Deflection processor **DDP 3310** fail to initialize correctly.

K Horizontal deflection block

Horizontal linearity

Adjust with **Lk1**.

Focusing

Set the brightness and the contrast to the normal level. Use the crosshatch pattern and adjust the picture for optimum resolution.

(Screen grid voltage) Ug2 voltage

Ug2 voltage can easily be adjusted with help of the on screen display, see section "other adjustments" / screen grid voltage.

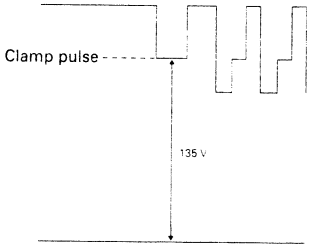
Ug2 adjusting with oscilloscope:

1. Set the brightness and the colour saturation to the normal level and the contrast to minimum.

2. At the end of the vertical blanking, there is a black current measurement pulse (clamp pulse) at **pin 9** of **ICh1**, **ICh2** and **ICh3**. Use an oscilloscope and find the output stage with the highest cut-off (i.e. the highest voltage during the black current measurement pulse).

3. Adjust the voltage of the clamp pulse to **+135 V** with Ug2 (see figure).

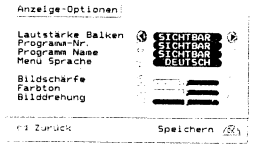
Note! Adjust the voltage with a clamp pulse.



Bedienungsanleitung

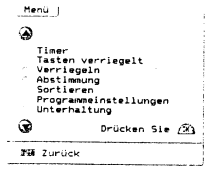
Ändern der Menüsprache

1. Drücken Sie zur Wahl des Vision-Menüs die gelbe Taste.
2. Drücken Sie zur Wahl des Einstellmenüs für das Display die rote Taste.
3. Wählen Sie "Menüsprache" mit den Pfeiltasten (auf-/abwärts) und ändern Sie die Menüsprache mit den Pfeiltasten (links/rechts).
4. Zum Speichern der Änderungen drücken Sie die OK-Taste.



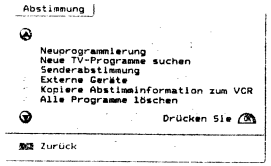
Manuelle Abstimmung

1. Wählen Sie die Programmnummer, die Sie abstimmen möchten.
2. Drücken Sie die MENU-Taste.
3. Wählen Sie "Abstimmung" mit den Pfeiltasten (auf-/abwärts) und drücken Sie die OK-Taste.
4. Wählen Sie "Senderabstimmung" mit den Pfeiltasten (links/rechts) und drücken Sie die OK-Taste.
5. Drücken Sie die rote Taste (Kanalsuchlauf).
6. Zum Speichern drücken Sie die OK-Taste.
7. Drücken Sie zum Verlassen des Menüs die TV-Taste.



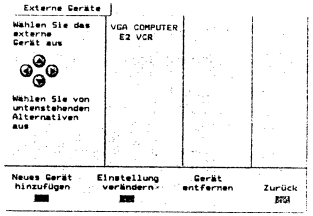
APSi (Automatisches Programmiersystem)

1. Drücken Sie die MENU-Taste.
2. Wählen Sie "Abstimmung" mit den Pfeiltasten und drücken Sie die OK-Taste.
3. Wählen Sie "Neuprogrammierung" und drücken Sie die OK-Taste.
4. Zur Neuabstimmung der Kanäle drücken Sie die rote Taste.
5. Drücken Sie zum Verlassen des Menüs die TV-Taste.



Wahl des VGA-Eingangs

1. Drücken Sie die MENU-Taste.
2. Wählen Sie "Abstimmung" mit den Pfeiltasten und drücken Sie die OK-Taste.
3. Wählen Sie "Externe Geräte" mit den Pfeiltasten und drücken Sie die OK-Taste.
4. Wählen Sie "VGA COMPUTER" mit den Pfeiltasten und drücken Sie die TV-Taste. (Wenn "VGA COMPUTER" nicht in der Liste enthalten ist, wählen Sie "Neues Gerät hinzufügen" durch Drücken der roten Taste. Wählen Sie anschließend mit den Pfeiltasten "Computer" und drücken Sie die TV-Taste.)

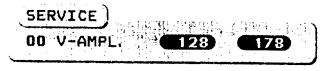


Service-Einstellungen

Aktivierung des Servicemodus

Bei Aktivierung des Servicemodus muss das Fernsehgerät eingeschaltet oder in Betriebsbereitschaft sein.

1. Halten Sie die ◢-Taste (Lautstärke verringern) an der **Bedieneinheit des Fernsehgerätes** gedrückt und geben Sie gleichzeitig mit der **Fernbedienung** MENU und dann TV als Kennwort ein. Lassen Sie die ◢-Taste los, nachdem Sie die TV-Taste gedrückt haben. Falls sich das Fernsehgerät nach Eingabe des Kennwortes in der Betriebsbereitschaft befindet, schalten Sie es durch Drücken der TV-Taste ein.
2. Aktivieren Sie den Servicemodus durch Drücken der i-Taste. Das folgende Einstellmenü erscheint auf dem Bildschirm:



Einstellzahl und -Name, Initialisierungs- (links) und Einstellwerte (rechts) werden in diesem Menü dargestellt.

3. Beenden Sie den Servicemodus durch Drücken der TV-Taste oder loggen Sie sich durch Ausschalten des Fernsehgerätes mit dem Hauptschalter aus.

Hinweis: Die Aktivierung des Servicemodus bleibt solange bestehen, bis das Fernsehgerät mit dem Netzschalter ausgeschaltet wird

Initialisierung des NVRAM (ICav19)

Falls der NVRAM ausgetauscht worden ist, muß er initialisiert und konfiguriert werden.

1. Schalten Sie das Fernsehgerät in die Betriebsbereitschaft. Halten Sie die ◢-Taste (Lautstärke verringern) an der Bedieneinheit des Fernsehgerätes gedrückt und geben Sie gleichzeitig mit der Fernbedienung MENU, TV und i als Kennwort ein. Lassen Sie die ◢-Taste los, nachdem Sie die TV-Taste gedrückt haben.
2. Starten Sie die Initialisierung durch Eingabe des Schlüsselcodes: BLAU, 2, 5, 4 und OK. Die Initialisierung dauert etwa 20 Sekunden. Das Fernsehgerät schaltet sich bei erfolgter Initialisierung automatisch ein.
3. Aktivieren Sie den Servicemodus durch Drücken der i-Taste.
4. Drücken Sie zur Vorkonfiguration des Fernsehgerätes die rote Taste, siehe auch Kapitel "Konfiguration und Fehlerdiagnose". (Stellen Sie sicher, daß die automatische Konfiguration IIC DEV 1-4 ergibt und die IF OPT-Bytes der aktuellen Konfiguration des Fernsehgerätes entsprechen.)
5. Stellen Sie die manuellen Optionsbytes (TEXT OPT, SYS OPT 1 & 2 und DSP OPT) ein, damit diese der aktuellen Konfiguration des Fernsehgerätes entsprechen. Speichern Sie die Einstellungen durch Drücken der OK-Taste.

Service-Einstellungen

6. *Schalten Sie das Fernsehgerät mit dem Netzschalter aus.*
7. Schalten Sie das Fernsehgerät mit dem Netzschalter ein und stellen Sie einen oder mehrere Fernsehkanäle ein.
8. Aktivieren Sie den Servicemodus und führen Sie die nötigen Serviceeinstellungen durch.
9. Schalten Sie das Fernsehgerät mit dem Netzschalter aus.

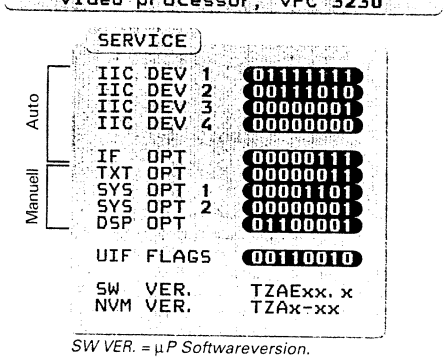
Konfiguration und Fehlerdiagnose
Das Fernsehgerät muß nach Hinzufügen oder Entfernen von Optionen konfiguriert werden. Bei Drücken der roten Taste im Servicemodus überprüft der Prozessor die Konfiguration des Fernsehgerätes und zeigt die Einstellungen auf dem Bildschirm. Die Konfiguration kann durch Drücken der OK-Taste gespeichert werden.

Achtung! Ziehen Sie vor Konfiguration des Fernsehgerätes das Scart 3-Kabel und das RCA-Kabel (Zeilen) heraus.

Dieses Feature kann auch bei der Fehlerdiagnose verwendet werden. Wenn ein Optionsbit nicht wie vorgesehen '1' ist, ist der IC (oder das Feature) entweder nicht vorhanden oder fehlerhaft.

Hinweis: IIC DEV 1 - 4 und die IF OPT-Bytes werden immer bei Drücken der roten Taste automatisch konfiguriert. TXT OPT, SYS OPT 1 & 2, DSP OPT und die UIF FLAGS-Bytes müssen manuell eingestellt werden.

Ändern der Optionsbytes
1. Wählen Sie den Konfigurationsmodus durch Drücken der roten Taste im Servicemodus.



SW VER. = µP Softwareversion.
NVM VER. = NVRAM Softwareversion.

2. Wählen Sie das IIC Device-Byte 1 - 4, das Option-Byte 1 - 5 oder das UIF Flags-Byte mit den Pfeiltasten (auf-/abwärts).
3. Der Name eines zugehörigen Bits wird bei Benutzung der Pfeiltasten (auf-/abwärts und links/rechts) sichtbar. Das gewählte Bit erscheint hervorgehoben.
4. Die Einstellung bzw. das Löschen der Bits erfolgt mit den Zifferntasten (0 ... 7).
5. Speichern Sie die Einstellungen durch Drücken der OK-Taste.
6. Gehen Sie durch Drücken der roten Taste in den normalen Servicemodus zurück.

Beschreibung der Option-Bytes

Bit	Beschreibung	Einstellung 7 6 5 4 3 2 1 0	'1'	'0'
	IIC DEV 1	**01101111**		
0	Videoprozessor, VPC 3230		Ja	Nein
1	Skarabäus, SDA 9400		Ja	Nein
2	Ablenkungsprozessor, DDP 3310		Ja	Nein
3	TV Tuner		Ja	Nein
4	Videoschalter, TEA6415C		Ja	Nein
5	Videoschalter, TDA6417		Ja	Nein
6	Surround Audioprozessor, MSP341XG		Ja	Nein
7	Subwoofer		Ja	Nein
	IIC DEV 2	**00111010**		
0	Audioprozessor, MSP 3411G		Ja	Nein
1	Megatext, SDA5275-3		Ja	Nein
2	4 Mb Textspeicher		Ja	Nein
3	16 Mb Textspeicher		Ja	Nein
4	16:9 Bildröhre		Ja	Nein
5	VGA-Anschluß		Ja	Nein
6	PIP Prozessor, SDA9489/9589		Ja	Nein
7	PIP Tuner		Ja	Nein
	IIC DEV 3	**00000001**		
0	Ext 3 installiert		Ja	Nein
1	Zeilenmodul installiert		Ja	Nein
2	DDP F6 oder neuer		Ja	Nein
3...7	Frei		Ja	Nein
	IIC DEV 4	**00000000**		
0...7	Frei		Ja	Nein
	IF OPT	**00000000**		
0	B/G IF		Ja	Nein
1	I IF		Ja	Nein
2	D/K IF		Ja	Nein
3	L/L' IF		Ja	Nein
4	Reserviert (auf 1 eingestellt, nicht verwendet)		Ja	Nein
5	Reserviert für NTSC M		Ja	Nein
6...7	Frei		Ja	Nein
	TXT OPT	**00000011**		
0	TOP aktiviert		Ja	Nein
1	FLOF aktiviert		Ja	Nein
2...4	Frei		Ja	Nein
5	EPG aktiviert		Ja	Nein
6	EPG-Aufnahme aktiviert		Ja	Nein
7	Frei		Ja	Nein
	SYS OPT 1	**00001101**		
0	A/V-Anschluß installiert		Ja	Nein
1	E1 RGB nicht aktiviert bei anderen Programmen		Ja	Nein
2	ACI aktiviert		Ja	Nein
3	Tonträger-Stummschaltung aktiviert		Ja	Nein
4	Lautstärke aktiviert		Ja	Nein
5...7	Frei		Ja	Nein
	SYS OPT 2	**00000001**		
0	Einstellung Bildneigung		Ja	Nein
1	Start Hotelmodus		Ja	Nein
2...6	Frei		Ja	Nein
7	Hotelfeatures aktiviert		Ja	Nein
	DSP OPT	**00110001**		
0	Subwoofer bit 0		Ja	Nein
1	Subwoofer bit 1		Ja	Nein
2	Ausgangslevel festgesetzt		Ja	Nein
3	Virtueller Zeilenstatus		Ja	Nein
4...7	Frei		Ja	Nein
	UIF FLAGS	**00110010**		
0-2	Logo bit 000 = Kein Logo, gehe direkt zum APSi 001 = Kein Logo, gehe zum Sprachmenü 011 = Finlux Logo 100 = Salora Logo 101 = Luxor Logo			
3	Erstinbetriebnahme		Ja	Nein
4	Lautstärkeanzeige EIN		Ja	Nein
5	Programmanzeige EIN		Ja	Nein
6	Kindersicherung EIN		Ja	Nein
7	Off Timer aktiviert		Ja	Nein

Service-Einstellungen über den I2C-Bus

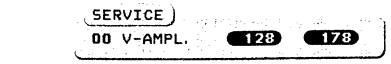
Tasten der Fernbedienung im Servicemodus
Befindet sich das Fernsehgerät im Servicemodus, können Sie durch Drücken der TV-Taste in den normalen Fernsehbetrieb gehen und durch Drücken der i-Taste in den Servicemodus zurückgehen.
Ziffern- und Pfeiltasten werden für Serviceeinstellungen verwendet. Mit der OK-Taste werden die Einstellungen gespeichert.

Einstellungen für verschiedene Bildformate
Wenn nicht anders vermerkt, werden alle Einstellungen mit einem PAL-Signal durchgeführt. Führen Sie Einstellungen im Format 4:3 bei normalem 4:3 Bildformat (klassisch) und Einstellungen im Format 16:9 bei Breitbildformat durch. Anschließend werden die erforderlichen Einstellungen bei anderen Bildformaten bzw. Signalen vorgenommen. Die notwendigen Einstellungen sind unten in der Tabelle aufgeführt.

Hinweis: Überprüfen Sie die Konfiguration des Fernsehgerätes, bevor die Einstellungen durchgeführt werden; führen Sie nur die erforderlichen Einstellungen durch.

Durchführung einer Serviceeinstellung
1. Geben Sie einen zweistelligen Code mit den Zifferntasten ein, der die Einstellung bestimmt (z.B. 04 = Bildweite, siehe nachfolgende Tabellen) oder wählen Sie die Einstellung mit den Pfeiltasten (aufwärts/abwärts).

Hinweis: Einstellungen am Netzteil und an UG2 müssen vor den Einstellungen der Bildgeometrie durchgeführt werden.



2. Nehmen Sie die Einstellung mit den Pfeiltasten (links/rechts) vor.
3. Speichern Sie den neuen Wert durch Drücken der OK-Taste.

Achtung!
- *Um unvollständige Einstellungen zu vermeiden, speichern Sie jede Einstellung direkt nach ihrer Durchführung ab.*
- *Falls eine Einstellung bei verschiedenen Bildformaten bzw. Signalen durchgeführt werden muß, wählen Sie zuerst durch Drücken der TV-Taste den normalen Betrieb und wählen dann das gewünschte Bildformat bzw. Signal. Durch Drücken der i-Taste gehen Sie in den Servicemodus zurück.*

Einstellungen der Bildgeometrie
Um die Einstellung der Bildgeometrie bei bewegtem Bild zu vereinfachen, erscheint ein roter Rahmen um die Ablenkfläche des Bildes.
Er kann mit der MENU-Taste auf EIN bzw. AUS geschaltet werden.

Einstellungen der Bildgeometrie

Einstellung	Code	Name im Display	Classic (4:3)	Progressives Scannen 50Hz 4:3	Weitformat (16:9)	Progressives Scannen 50Hz 16:9	VGA 70 Hz	VGA 60 Hz	Hinweis!
Vertikalamplitude	00	V-AMPL.	X	X			X	X	
Vertikale Außermittenverchiebung	01	V-SHIFT	X	X			X	X	
Vertikale Linearität	02	V-LINEARITY	X	X			X		
Vertikale S-Korrektur	03	S-CORR.	X	X			X		
Weite	04	WIDTH	X	X			X	X	
Horizontalablenkung	05	H-SHIFT	X						Stellen Sie die Ablenkung auf die Mitte des Bildschirmes ein (nur bei VGA-Geräten).
Horizontalphase Video	06	PHASE	X						
Horizontales Austasten	07	HOR BLANK	X						Suchen Sie zuerst die Einstellwerte (rechts/links), wo die Austastung sich auf den roten Bereich zu verschieben beginnt. Stellen Sie dann Austastung auf die Mitte von diesen instellwerten ein.
Parabel	08	PARABOLA	X	X	X	X	X	X	
Obere Ecken	09	CORNER UP	X	X			X	X	
Untere Ecken	10	CORNER LO	X	X			X	X	
Bogen	11	BOW	X	X			X		
Trapez	12	TRAPEZIUM	X	X			X		
Parallelogrammverzerrung	13	ANGLE	X	X			X		

Andere Einstellungen

Einstellung	Code	Name im Display	Hinweis!
Schirmgitterspannung	14	G2 DISP.	Stellen Sie Ug2 ein, bis das das Display einen Wert von 180 ±20 zeigt. *Hinweis: Drücken Sie nicht die OK-Taste, wenn nur die Einstellung von Ug2 erforderlich ist.* Wenn die Einstellung der Farbtemperatur erforderlich ist, starten Sie den Vorgang durch Drücken der OK-Taste. Dieses korrigiert den fehlerhaften Wert der Codes 14 - 19 und sichert den Referenzwert (17 - 19) der Strahlkanone für die höchsten Werte.
Rotverstärkung Grünverstärkung Blauverstärkung	15 16 17	R GAIN G GAIN B GAIN	Dieser Vorgang ist z.B. bei ausgetauschter Bildröhre oder CRT-Modul usw. notwendig. Stellen Sie zuerst die Verstärkungswerte (weiße Fläche bis 80 Nit) und anschließend die Referenzwerte (dunkle Fläche bis 1.5 Nit) ein. Prüfen Sie noch einmal die Verstärkungswerte und stellen Sie diese erneut ein, falls erforderlich.
Rotreferenz Grünreferenz Blaureferenz	18 19 20	R REF. G REF. B REF.	Einstellen: Drücken der MENU-Taste verändert das Graustufenbild/ externes Bild und Drücken der grünen und gelben Taste verändert den Wert für Kontrast/Helligkeit.
VPU-Taktgeber	21	VCO	Diese Einstellung erfolgt automatisch und im Normalfall wird der Wert durch Drücken der OK-Taste gespeichert. Wenn das Display 9999 anzeigt, kann die Einstellung nicht erfolgen und es wird eine Reparatur erforderlich. *Hinweis: Verwenden Sie ein Standardsignal von 50 Hz!*
Hochspannungsbegrenzung	22	EHT PROT	Stellen Sie den Wert so hoch ein, bis das Fernsehbild ausgetastet wird. Gleichzeitig wird der Wert automatisch in 60 Schritten abgesenkt. Drücken Sie danach die OK-Taste, um den Wert zu speichern.

Variable Einstellungen

Einstellung	Code	Name im Display	Hinweis!
BCL-Schwellwert (Strahlstrombegrenzung)	23	BCL THRES	Für Standardwerte der Bildröhre siehe separate Hinweise (CRT dependant adjustments)
BCL-Zeitkonstante	24	BCL TC	
BCL-Verstärkung	25	BCL GAIN	
EHT-Ausgleich für Horizontalamplitude	26	EHTH	
EHT-Ausgleich für Horizontalphase	27	EHTH PHA	
Zeitkonstante für Horizontalphase	28	EHTH TC	
EHT-Ausgleich für Vertikalamplitude	29	EHTV	
Zeitkonstante für H/V-Amplitude	30	EHTV TC	
Schwellwert für H/V-Amplitude/EHT-Korrektur	31	EHT THRES	
Vertikalausgleich bei höheren Strahlströmen	32	EHTV2	
Horizontalausgleich bei höheren Strahlströmen	33	EHTH2	
Weißspitzenbegrenzung	34	Y MAX	
Zweite obere Ecken	35	CORN 2 UP	
Zweite untere Ecken	36	CORN 2 LO	

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Service-Einstellungen

O Netzteil

Versorgungsspannung und Schutzschaltung

1. Stellen Sie Helligkeit und Kontrast auf den normalen Wert ein. Schließen Sie ein Universal-Voltmeter an der Kathode von **Do16** an.

2. Stellen Sie die **Spannung U1** mit **Po1** ein. Die Spannung ist vom Bildröhrentyp abhängig, siehe auch Abschnitt "Variable Bauteile".

3. Prüfen sie den Überleistungsschutz nach Durchführung von Servicearbeiten im primären Schaltkreis der Stromversorgung. Schalten sie das Fernsehgerät durch Drücken des Netzschalters aus. Schließen Sie den Kondensator **Co36** kurz und lassen sie die Kurzschlußverbindung bestehen. Wenn der Überleistungsschutz richtig arbeitet, startet die Stromversorgung nicht (aber versucht zu starten). Schalten sie das Fernsehgerät durch Drücken des Netzschalters aus. Entfernen Sie die Kurzschlußschaltung und schalten Sie das Fernsehgerät durch Drücken des Netzschalters ein.

Sicherheitsfeatures

Die Aktivierung des Servicemodus setzt folgende Features außer Betrieb:

- Horizontale Sicherheitsfunktion (EHT)
- Kontrolle bei Inbetriebnahme: Videoprozessor **VPC 3230**, Skarabäus **SDA 9400** und Ablenkungsprozessor **DDP 3310** können nicht korrekt initialisieren.

O Horizontaler Ablenkungsblock

Horizontale Linearität

Mit **Lk1** einstellen.

Fokussierung

Stellen Sie Helligkeit und Kontrast auf den normalen Wert ein. Wählen Sie die Kreuzschraffur und stellen Sie das Bild auf die optimale Auflösung ein.

(Schirmgitterspannung) Spannung Ug2

Die Spannung Ug2 kann leicht mit Hilfe des Bildschirmdisplays eingestellt werden, siehe Abschnitt "Andere Einstellungen" / Schirmgitterspannung.

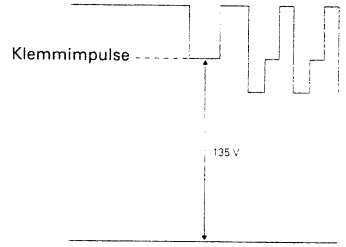
Einstellen von Ug2 mit dem Oszilloskop

1. Stellen Sie Helligkeit und Farbsättigung auf den normalen Wert und den Kontrast auf ein Minimum ein.

2. Am Ende der vertikalen Austastung liegt ein Schwarzstrom-Meßimpuls (Klemmimpuls) am **Pin 9** bei **ICh1**, **ICh2** und **ICh3** vor. Benutzen Sie ein Oszilloskop und ermitteln Sie die Ausgangsstufe mit dem höchsten Abschaltwert (der höchste Spannungswert während des Schwarzstrom-Meßimpulses).

3. Stellen Sie die Spannung am Klemmimpuls auf **+135 V** mit Ug2 ein (siehe Abbildung).

Hinweis: Stellen Sie die Spannung mit einem Klemmimpuls ein.



Bruksanvisning

Ändring av menyspråk

1. *Välj Önskebild-menyn* genom att trycka på den gula knappen.
2. Välj Display-inställningar genom att trycka på den röda knappen.
3. Välj Menyspråk med pilknapparna (upp/ned) och ändra menyspråket med pilknapparna (vänster/höger).
4. Tryck på OK för att spara ändringen.

Manuell avstämning

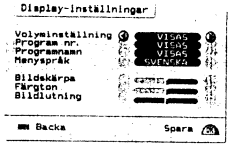
1. Välj programnumret du vill avstämma.
2. Tryck på MENU-knappen.
3. Välj "Söka program" med pilknapparna (upp/ned) och tryck på OK-knappen.
4. Välj "Söka manuellt" med pilknapparna (upp/ned) och tryck på OK-knappen.
5. Tryck på den röda knappen (Kanalsökning).
6. Tryck på OK för att spara.
7. Tryck på TV för att lämna läget.

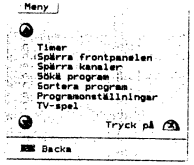
APSi (Automatic Programming System)

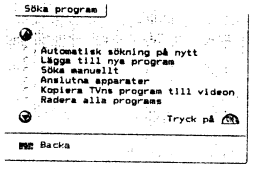
1. Tryck på MENU-knappen.
2. Välj "Söka program " med pilknapparna (upp/ned) och tryck på OK-knappen.
3. Välj "Automatisk sökning på nytt" och tryck på OK-knappen.
4. För att ställa in kanaler, tryck på den röda knappen.
5. Tryck på TV för att lämna läget.

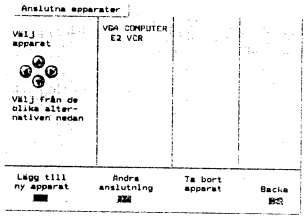
Val av VGA-ingång

1. Tryck på MENU-knappen.
2. Välj "Söka program " med pilknapparna (upp/ned) och tryck på OK-knappen.
3. Välj "Anslutna apparater" med pilknapparna (upp/ned) och tryck på OK-knappen.
4. Välj "VGA COMPUTER" med pilknapparna och tryck på TV-knappen. (Ingår "VGA COMPUTER" inte i listan, välj "Lägg till ny apparat" genom att trycka på den röda knappen. Välj därefter "Dator" med pilknapparna och tryck på OK-knappen.)







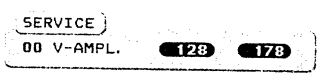


Service-inställningar

Aktivering av service-läget

Mottagaren måste vara påslagen eller i beredskapsläge när man aktiverar service-läget.

1. Håll **frontpanelens** ◢- (volym minus) knapp intryckt och mata samtidigt in lösenordet: Tryck först på MENU och därefter på TV på **fjärrkontrollen**. Frigör ◢- knappen efter att du har tryckt på TV-knappen. Är mottagaren i beredskapsläge efter att lösenordet är inmatat, slå på mottagaren genom att trycka på TV-knappen.
2. Aktivera service-läget genom att trycka på i-knappen. Följande inställning visas på bildskärmen:



Inställningens nummer och namn, initialiseringsvärde (vänster) och justervärde (höger) visas på menyn.

3. Lämna service-läget genom att trycka på TV-knappen eller kvittera ut dig från service-läget genom att stänga av mottagaren med huvudströmbrytaren.

Obs! Service-läget är tillgänglig tills mottagaren stängs av med huvudströmbrytaren.

Initialisering av NVRAM (ICav19)

Ifall NVRAM:en är utbytt, måste den initialiseras och konfigureras.

1. Ställ mottagaren i beredskapsläge. Håll frontpanelens ◢- (volym minus) knapp intryckt och mata samtidigt in lösenordet: Mata in MENU, TV och i med fjärrkontrollen. Frigör ◢-knappen efter att du har tryckt på TV-knappen.
2. Starta initialiseringen genom att mata in nyckelordet: BLÅ, 2, 5, 4 och OK. Initialiseringen tar ca. 20 s. Mottagaren slås automatiskt på när initialiseringen är utförd.
3. Aktivera service-läget genom att trycka på i-knappen.
4. Tryck på den RÖDA knappen för att förkonfigurera mottagaren. Se också avsnitt "Konfigurering och felsökning". (Kontrollera att resultatet av den automatiska konfigureringen av IIC DEV 1-4 och IF OPT byte motsvarar den aktuella konfigureringen för mottagaren).
5. Ställ in manuella optionbytes (TXT OPT, SYS OPT 1 & 2 och DSP OPT) till att motsvara den aktuella konfigureringen för mottagaren. Tryck på OK-knappen för att spara inställningen.
6. Stäng av mottagaren med huvudströmbrytaren.
7. Slå på mottagaren med huvudströmbrytaren och ställ in en eller flera tv-kanaler.
8. Aktivera service-läget och gör nödvändiga service-justeringar.
9. Stäng av mottagaren med huvudströmbrytaren.

Service-inställningar

Konfigurering och felsökning

Mottagaren måste konfigureras när man lägger till eller tar bort egenskaper. Genom att trycka på den RÖDA knappen i service-läge, kontrollerar processorn mottagarens konfiguration och visar inställningen på bildskärmen. Konfigurationen kan sparas genom att trycka på OK-knappen.

Obs! Koppla ur Scart 3 och RCA (linjeutgång) kablar före du konfigurerar mottagaren.

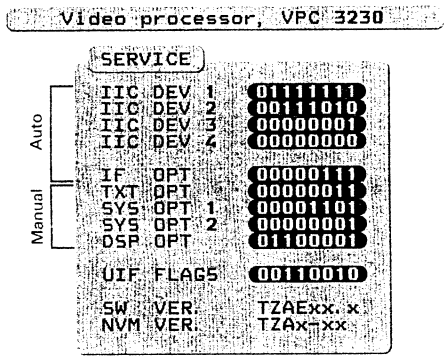
Denna egenskap kan också användas till felsökning. Om en option bit inte är '1' när den skall vara det, saknas en IC (eller egenskapen) eller så är den defekt.

Obs! IIC DEV 1-4 och IF OPT byterna konfigureras automatiskt varje gång man trycker på den RÖDA-knappen.

TXT OPT, SYS OPT 1 & 2, DSP OPT och UIF FLAGS byterna måste ställas in manuellt.

Ändring av option-bytes

1. Välj konfigurerings-läge genom att trycka på den RÖDA-knappen i service-läget.



SW VER. = µP programversion.
NVM VER. = NVRAM programversion.

2. Välj IIC Device byte 1 - 4, Option byte 1 - 5 eller Uif flags byte med pilknapparna (upp/nedåt).
3. Namnet på gällande bit visas när man använder pilknapparna (upp/nedåt och vänster/höger). Vald bit visas "upplyst".
4. Sätt på / stäng av bitarna med sifferknapparna (0 ... 7).
5. Spara inställningen med OK-knappen.
6. Återgå till normalt service-läge genom att trycka på den RÖDA knappen.

Option byte förklaringar

Bit	Förklaring	Inställning 7 6 5 4 3 2 1 0	'1'	'0'
	IIC DEV 1	**01101111**		
0	Videoprocessor VPC 3230		Ja	Nej
1	Scarabeus SDA 9400		Ja	Nej
2	Avlänkningsprocessor DDP 3310		Ja	Nej
3	TV-tuner		Ja	Nej
4	Videoswitch, TEA6415C		Ja	Nej
5	Videoswitch, TDA6417		Ja	Nej
6	Audio processor MSP341XG		Ja	Nej
7	Subwoofer		Ja	Nej
	IIC DEV 2	**00111010**		
0	Audioprocessor MSP 3411G		Ja	Nej
1	Megatext SDA5275-3		Ja	Nej
2	4 Mb textminne		Ja	Nej
3	16 Mb textminne		Ja	Nej
4	16:9 bildrör		Ja	Nej
5	VGA-anslutning		Ja	Nej
6	PIP-processor, SDA9489/9589		Ja	Nej
7	PIP-tuner		Ja	Nej
	IIC DEV 3	**00000001**		
0	Ext 3		Ja	Nej
1	Linjeutgångsmodulen monterad		Ja	Nej
2	DDP F6 eller nyare		Ja	Nej
3...7	Fri		Ja	Nej
	IIC DEV 4	**00000000**		
0...7	Fri		Ja	Nej
	IF OPT	**00000000**		
0	B/G norm		Ja	Nej
1	I norm		Ja	Nej
2	D/K norm		Ja	Nej
3	L/L' norm		Ja	Nej
4	Reserverad (Sätt till 1, används inte		Ja	Nej
5	Reserverad för NTSC M		Ja	Nej
6...7	Fri		Ja	Nej
	TXT OPT	**00000011**		
0	TOP		Ja	Nej
1	FLOF		Ja	Nej
2...4	Fri		Ja	Nej
5	EPG		Ja	Nej
6	EPG-inspelning		Ja	Nej
7	Fri		Ja	Nej
	SYS OPT 1	**00001101**		
0	A/V-anslutning		Ja	Nej
1	E1 RGB spärrad på andra programplatse		Ja	Nej
2	ACI		Ja	Nej
3	Bärvågsspärr		Ja	Nej
4	Loudness		Ja	Nej
5...7	Fri		Ja	Nej
	SYS OPT 2	**00000001**		
0	Bildlutnings-justering		Ja	Nej
1	Autostart (hotell-tv)		Ja	Nej
2...6	Fri		Ja	Nej
7	Hotell-tv		Ja	Nej
	DSP OPT	**00110001**		
0	Subwoofer bit 0		Ja	Nej
1	Subwoofer bit 1		Ja	Nej
2	Fixerad-linjeutgångsnivå		Ja	Nej
3	Linjeutgångsläge virtual		Ja	Nej
4...7	Fri		Ja	Nej
	UIF FLAGS	**00110010**		
0-2	Logo bit 000 = ingen logo, direkt till APSi 001 = ingen logo, direkt till språkmenyn 011 = Finlux logo 100 = Salora logo 101 = Luxor logo			
3	Ny tv (fabriksny)		Ja	Nej
4	Volymindikering PÅ		Ja	Nej
5	Program info PÅ		Ja	Nej
6	Frontpanel läs PÅ		Ja	Nej
7	Avstängningstimer		Ja	Nej

Service-inställningar via I²C-buss

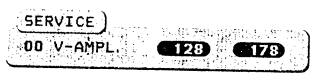
Fjärrkontrollknappar i service-läge
När mottagaren är i service-läge, kan du välja normalt tv-läge med TV-knappen och återgå till service-läget med i-knappen.
Siffer- och pilknappar används för service-inställningar. OK-knappen sparar inställningarna.

Justeringar för olika bildformat
Gör alla inställningar med PAL-signal om inte annat näms. Gör 4:3-apparaters inställningar med normalt 4:3 (classic) bildformat och 16:9-apparaters inställningar med wide (16:9) bildformat. Gör därefter nödvändiga inställningar med andra bildformat/signaler. Nödvändiga inställningar i tabellen nedtill.

Obs! Kontrollera apparatens konfiguration före inställning och gör endast nödvändiga inställningar.

För att göra service-inställning
1. Mata in en tvåsiffrig kod för att välja inställning (t.ex. 04 = bildbredd, se tabellen) med sifferknapparna eller välj inställning stegvist med pilknapparna (up/nedåt).

Obs! Driftspänning och Ug2 inställningarna måste göras före bildgeometri-inställningar.



2. Justera med pilknapparna (vänster/höger).

3. Spara inställningen med OK-knappen.

Obs!
- *För att undvika ofullständig inställning, spara varje inställning direkt efter de är utförda.*
- *Måste en inställning göras separat för olika bildformat/signaler, välj först normalt tv-läge med TV-knappen och välj därefter bildformat/signal. Återgå därefter till service-läget genom att trycka på i-knappen.*

För att göra bildgeometriinställningar
För att geometriinställningar skall kunna göras med rörlig bild visas en röd ram runt bildens avlänkningsyta. Ramen kan kopplas PÅ/AV med MENU-knappen.

Bildgeometri-inställningar

Inställning	Kod	OSD-namn	Normal (4:3)	Progressiv scan 50 Hz 4:3	Bred (16:9)	Progressiv scan 50 Hz 16:9	VGA 70 Hz	VGA 60 Hz	Obs!
Vertikal amplitud	00	V-AMPL.	X	X			X	X	
Vertikal centrering	01	V-SHIFT	X	X			X	X	
Vertikal linearitet	02	V-LINEARITY	X	X			X		
Vertikal S-korrigering	03	S-CORR.	X	X			X		
Bildbredd	04	WIDTH	X	X			X	X	
Horisontal centrering	05	H-SHIFT	X						Justera avlänkningen till bildrutans mitt (endast VGA-mottagare).
Horisontal fas	06	PHASE	X						
Horisontal släckning	07	HOR BLANK	X						Sök först upp gränsvärdena då horisontalsläckningen går över bildområdet, både till vänster och höger, och ställ därefter in horisontalsläckningen till mitten mellan dessa värden.
Parabol	08	PARABOLA	X	X	X	X	X	X	
Övre hörnen	09	CORNER UP	X	X			X	X	
Nedre hörnen	10	CORNER LO	X	X			X	X	
Bow	11	BOW	X	X			X		
Trapets	12	TRAPEZIUM	X	X			X		
Paralellogram distortion	13	ANGLE	X	X			X		

Andra inställningar

Inställning	Kod	OSD-namn	Obs!
Skärmgallerspänning	14	G2 DISP.	Justera Ug2 tills 180 ± 20 visas. *Obs! Tryck inte på OK-knappen om endast Ug2 inställningen är nödvändig.* Måste färgtemperaturen justeras, starta den här genom att trycka på OK-knappen. Detta återställer grundvärdena för koderna 14...19 och låser referensvärdet (17...19) på den högsta färgkanonen.
Röd förstärkning Röd förstärkning Blå förstärkning	15 16 17	R GAIN G GAIN B GAIN	Denna procedur är nödvändig när t.ex. bildrör, CRT-modulen, etc. är utbytta. Justera först GAIN värdet (vitt till 80 nit) och därefter REF värdet (svart till 1,5 nit). Kontrollera GAIN värdena på nytt och justera om nödvändigt.
Röd referens referens referens	18 19 20	R REF. Grön G REF. Blå B REF.	Justering: När du trycker på MENU-knappen byts gråbild/external-bild och trycker du på den GRÖNA och den GULA-knappen ändras kontrast ljus-värdena.
VPU klockoskillator	21	VCO	Denna justering är automatisk, normalt behöver du endast trycka på OK för att spara inställningen. Visas 9999, fungerar inte inställningen och en reparation måste göras. Obs! Använd standard 50 Hz signal!
Högspänningsbegränsning	22	EHT PROT	Justera värdet uppåt tills bilden släcks. Samtidigt minskas värdet automatiskt med 60 steg. Därefter tryck på OK för att spara inställningen.

Varierande inställningar

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Inställning	Kod	OSD-namn	Obs!
BCL (beam current limitation) tröskel	23	BCL THRES	Bildrörstyp relaterade förinställningar informeras separat (CRT dependant adjustments).
BCL-tidskonstant	24	BCL TC	
BCL-förstärkning	25	BCL GAIN	
EHT-kompensering för H-amplitud	26	EHTH	
EHT-kompensering för H-fas	27	EHTH PHA	
Tidskonstant för H-fas	28	EHTH TC	
EHT-kompensering för V-amplitud	29	EHTV	
Tidskonstant för H/V-amplitud	30	EHTV TC	
Tröskel för H/V-amplituds EHT-korrigering	31	EHT THRES	
Vertikal-kompensering vid hög strålström	32	EHTV2	
H-kompensering vid hög strålström	33	EHTH2	
Vit-topp begränsning	34	Y MAX	
2. övre hörnen	35	CORN 2 UP	
2. nedre hörnen	36	CORN 2 LO	

Service-inställningar

O Drivspänningsblocket

Drivspänning och skyddskretsen

1. Ställ ljus och kontrast på normal nivå. Anslut en universalvoltmeter till katoden på **Do16**.

2. Justera **U1-spänningen** med **Po1**. Spänningen är beroende på bildrörstyp, se avsnitt "Varierande komponenter".

3. Kontrollera överströmskyddet efter serviceingrepp på nätdelens primärsida. Stäng av mottagaren med huvudnätbrytaren. Kortslut kondensator **Co36** och håll kortslutningen på plats. Koppla på mottagaren med huvudnätbrytaren. Fungerar överströmskyddet, startar inte nätdelen (men försöker att starta). Stäng av mottagaren med huvudnätbrytaren. Ta bort kortslutningen och slå därefter på apparaten igen med huvudnätbrytaren.

Säkerhetsegenskaper

Aktivering av service-läget stänger av följande egenskaper:

- Horisontal skyddsfunktion (EHT)
- Uppstartningskontroll: Videoprocessor **VPC 3230**, Scarabeus **SDA 9400** och Avlänkningsprocessor **DDP 3310** initialiseras inte korrekt.

Horisontal avlänkningsblock

Horisontal linearitet

Justera med **Lk1**.

Fokus

Ställ ljus och kontrast på normal nivå. Använd rutmöster testbild och justera bilden för optimal resolution.

(Skärmgallerspänning) Ug2-spänningen

Ug2-spänningen kan lätt justeras med hjälp av bilden, se avsnitt "Andra inställningar" / skärmgallerspänning.

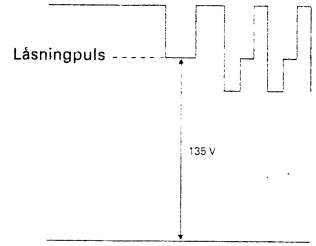
Inställning av Ug2 med hjälp av oscilloskop:

1. Sätt ljus och färgmättnad till normal nivå och kontrasten till minimum.

2. Efter vertikalsläckning finns en svartnivå mätpuls (clamp puls) på **stift 9** på **ICh1**, **ICh2** och **ICh3**. Använd ett oscilloskop och sök efter slutsteget med högsta svartnivån (m.a.o. högsta spänningen på svartnivå mätpulsen).

3. Justera spänningen till **+135 V** med Ug2 (se figuren).

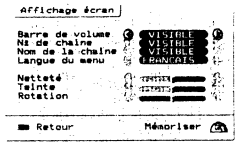
Obs! Justera spänningen med låsningspulsen (clamp puls).



Mode d'emploi

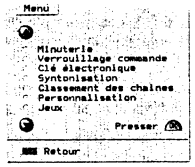
Changement de la langue de menu

1. Appuyez sur la touche jaune pour sélectionner le menu Vision.
2. Appuyez sur la touche rouge pour sélectionner le menu Affichage écran.
3. Sélectionnez "Langue du menu" à l'aide des touches fléchées (haut/bas) et changez la langue de menu à l'aide des touches fléchées (gauche/droite).
4. Appuyez sur la touche OK pour enregistrer les modifications.



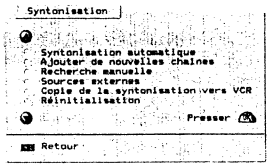
Recherche manuelle

1. Sélectionnez le numéro du programme à rechercher.
2. Appuyez sur la touche MENU.
3. Sélectionnez "Syntonisation" à l'aide des touches fléchées (haut/bas) et appuyez sur la touche OK.
4. Sélectionnez "Recherche manuelle" à l'aide des touches fléchées (haut/bas) et appuyez sur la touche OK.
5. Appuyez sur la touche rouge (Recherche de canal).
6. Appuyez sur la touche OK pour procéder à l'enregistrement.
7. Appuyez sur la touche TV pour quitter.



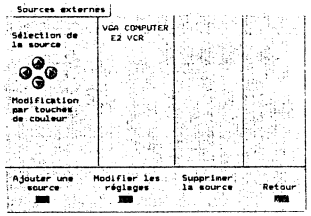
APSi (système de programmation automatique)

1. Appuyez sur la touche MENU.
2. Sélectionnez "Syntonisation" à l'aide des touches fléchées et appuyez sur la touche OK.
3. Sélectionnez "Syntonisation automatique" et appuyez sur la touche OK.
4. Pour rechercher de nouveau les chaînes, appuyez sur la touche rouge.
5. Appuyez sur la touche TV pour quitter.



Sélection de l'entrée VGA

1. Appuyez sur la touche MENU.
2. Sélectionnez "Syntonisation" à l'aide des touches fléchées et appuyez sur la touche OK.
3. Sélectionnez "Sources externes" à l'aide des touches fléchées et appuyez sur la touche OK.
4. Sélectionnez "VGA COMPUTER" à l'aide des touches fléchées et appuyez sur la touche TV (si "VGA COMPUTER" n'apparaît pas dans la liste, sélectionnez "Ajouter une source" en appuyant sur la touche rouge. Sélectionnez ensuite "Ordinateur" à l'aide des touches fléchées et appuyez sur la touche OK).



Réglages de service

Activation du mode de service

Le récepteur doit être sous tension ou en veille lors de l'activation du mode de service.

1. Saisissez votre mot de passe tout en maintenant enfoncée la touche - (volume moins) **sur le panneau avant du TV** : appuyez d'abord sur la touche MENU, puis sur la touche TV **de la télécommande**. Relâchez la touche - après avoir appuyé sur la touche TV. Si le récepteur est en veille une fois le mot de passe saisi, allumez-le en appuyant sur la touche TV.
2. Activez le mode de service en appuyant sur la touche i. Le menu de réglage suivant apparaît à l'écran :

Le numéro et le nom du réglage, la valeur d'initialisation (à gauche) et la valeur de réglage (à droite) s'affichent dans le menu.

3. Appuyez sur la touche TV pour quitter le mode de service et utilisez l'interrupteur principal pour éteindre le récepteur.

Remarque! Le mode de service reste activé jusqu'à ce que le récepteur soit éteint à l'aide de l'interrupteur principal.

Initialisation de la NVRAM (ICav19)

Si la RAM rémanente (NVRAM) a été remplacée, vous devez l'initialiser et la configurer.

1. Mettez le récepteur en veille. Saisissez votre mot de passe tout en maintenant enfoncée la touche - (volume moins) de la télécommande : appuyez sur les touches MENU, TV et i de la télécommande. Relâchez la touche - après avoir appuyé sur la touche TV.
2. Commencez l'initialisation en entrant le code clé : touches bleue, 2, 5, 4 et OK. L'initialisation dure environ 20 secondes. Le récepteur s'allume automatiquement lorsque l'initialisation est terminée.
3. Activez le mode de service en appuyant sur la touche i.
4. Appuyez sur la touche RED pour préconfigurer le récepteur. Reportez-vous également au chapitre "Configuration et diagnostic des pannes" (vérifiez que les résultats de la configuration automatique au niveau des octets IIC DEV 1-4 et IF OPT correspondent à la configuration réelle du récepteur).
5. Configurez manuellement les octets d'option (TXT OPT, SYS OPT 1 & 2 et DSP OPT) afin qu'ils correspondent à la configuration réelle du récepteur. Appuyez sur la touche OK pour enregistrer les paramètres.
6. Utilisez l'interrupteur principal pour éteindre le récepteur.

Réglages de service

7. Utilisez l'interrupteur principal pour allumer le récepteur et recherchez une ou plusieurs chaînes de télévision.
8. Activez le mode de service et procédez aux réglages de service requis.
9. Utilisez l'interrupteur principal pour éteindre le récepteur.

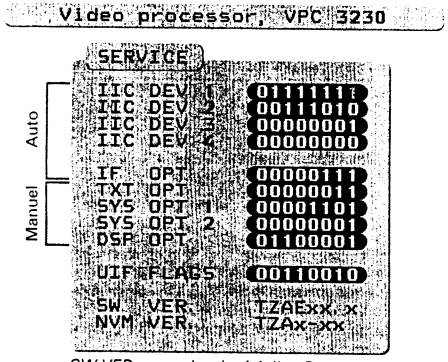
Configuration et diagnostic des pannes
Le récepteur doit être configuré après tout ajout ou suppression d'option. Lorsque vous appuyez sur la touche rouge en mode de service, le processeur contrôle la configuration du récepteur et affiche les paramètres à l'écran. La configuration peut être enregistrée à l'aide de la touche OK.

Remarque! Avant de configurer le récepteur, débranchez les câbles Péritel 3 et RCA (sortie de ligne).

Cette fonction peut aussi être utilisée pour le diagnostic des pannes. Si un bit d'option n'est pas à '1' lorsqu'il devrait être défini sur cette valeur, cela signifie que le circuit imprimé (ou la fonction) est soit absent, soit défectueux.

Remarque ! Les octets IIC DEV 1-4 et IF OPT sont configurés automatiquement à chaque utilisation de la touche rouge.
Les octets TXT OPT, SYS OPT 1 & 2, DSP OPT et UIF FLAGS doivent être configurés manuellement.

Modification des octets d'option
1. Sélectionnez le mode de configuration en appuyant sur la touche rouge en mode de service.



SW VER. = version logicielle µP.
NVM VER. = version logicielle NVRAM.

2. Sélectionnez l'octet IIC Device 1 - 4, Option 1 - 5 ou Uif Flags à l'aide des touches fléchées (haut/bas).
3. Vous pouvez visualiser le nom du bit correspondant à l'aide des touches fléchées (haut/bas et gauche/droite). Le bit sélectionné apparaît en surbrillance.
4. Utilisez les touches numériques (0 ... 7) pour mettre les bits à '1' / '0'.
5. Appuyez sur la touche OK pour enregistrer les paramètres.
6. Appuyez sur la touche rouge pour revenir au mode de service normal.

Description de l'octet d'option

Bit	Description	Configuration 7 6 5 4 3 2 1 0	'1'	'0'
	IIC DEV 1	**01101111**		
0	Processeur vidéo VPC 3230		Oui	Non
1	Scarabeus SDA 9400		Oui	Non
2	Processeur de déflexion DDP 3310		Oui	Non
3	Tuner TV		Oui	Non
4	Interrupteur vidéo, TEA6415C		Oui	Non
5	Interrupteur vidéo, TDA6417		Oui	Non
6	Processeur audio MSP341XG		Oui	Non
7	Subwoofer		Oui	Non
	IIC DEV 2	**00111010**		
0	Processeur audio MSP 3411G		Oui	Non
1	Mégatexte SDA5275-3		Oui	Non
2	4 Mo de mémoire de texte		Oui	Non
3	16 Mo de mémoire de texte		Oui	Non
4	Tube cathodique 16:9		Oui	Non
5	Connexion VGA		Oui	Non
6	Processeur PIP, SDA9489/9589		Oui	Non
7	Tuner PIP		Oui	Non
	IIC DEV 3	**00000001**		
0	Ext 3 installée		Oui	Non
1	Module de sortie de ligne installé		Oui	Non
2	DDP F6 ou plus nouveau		Oui	Non
3...7	Libre		Oui	Non
	IIC DEV 4	**00000000**		
0...7	Libre		Oui	Non
	IF OPT	**00000000**		
0	B/G IF		Oui	Non
1	I IF		Oui	Non
2	D/K IF		Oui	Non
3	L/L' IF		Oui	Non
4	Réservé (à 1, non utilisé)		Oui	Non
5	Réservation pour NTSC M		Oui	Non
6...7	Libre		Oui	Non
	TXT OPT	**00000011**		
0	TOP activé		Oui	Non
1	FLOF activé		Oui	Non
2...4	Libre		Oui	Non
5	EPG activé		Oui	Non
6	Enregistrement EPG activé		Oui	Non
7	Libre		Oui	Non
	SYS OPT 1	**00001101**		
0	Connecteur A/V installé		Oui	Non
1	E1 RVB désactivé sur les autres programmes		Oui	Non
2	ACI activé		Oui	Non
3	Blocage de porteuse activé		Oui	Non
4	Intensité sonore activée		Oui	Non
5...7	Libre		Oui	Non
	SYS OPT 2	**00000001**		
0	Réglage de l'inclinaison		Oui	Non
1	Démarrage fonctions TV hôtel		Oui	Non
2...6	Libre		Oui	Non
7	Fonctions TV hôtel activées		Oui	Non
	DSP OPT	**00110001**		
0	Bit de subwoofer à 0		Oui	Non
1	Bit de subwoofer à 1		Oui	Non
2	Niveau de sortie de ligne fixe		Oui	Non
3	Etat virtuel de la sortie de ligne		Oui	Non
4...7	Libre		Oui	Non
	UIF FLAGS	**00110010**		

0-2 Bit de logo
000 = aucun logo, aller directement à APSi
001 = aucun logo, aller directement au menu de langue
011 = logo Finlux
100 = logo Salora
101 = logo Luxor

3	Premier démarrage	Oui	Non
4	Affichage de la barre de volume activé (ON)	Oui	Non
5	Affichage des informations de programme activé (ON)	Oui	Non
6	Verrouillage du panneau avant activé (ON)	Oui	Non
7	Compteur d'arrêt actif	Oui	Non

Réglages de service au moyen du bus I²C

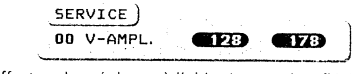
Touches de la télécommande en mode de service
Lorsque le récepteur est en mode de service, vous pouvez sélectionner le mode d'utilisation normale en appuyant sur la touche TV et revenir au mode de service en appuyant sur la touche i.
Les touches numériques et les touches fléchées sont utilisées pour les réglages de service. La touche OK permet d'enregistrer la configuration.

Réglages pour des formats d'image différents
Effectuez tous vos réglages avec le signal PAL, sauf indication contraire. Pour un téléviseur 4:3, utilisez le format d'image 4:3 normal (classique) et pour un téléviseur 16:9, utilisez le format d'image grand écran (16:9). Effectuez ensuite les réglages nécessaires avec d'autres signaux/formats d'image. Les réglages requis figurent dans le tableau ci-dessous.

Remarque ! Vérifiez la configuration du récepteur avant d'effectuer les réglages et ne procédez qu'aux réglages qui s'avèrent indispensables.

Réalisation des réglages de service
1. A l'aide des touches numériques, affectez à chaque réglage un code à deux chiffres (par exemple, 04 = largeur, reportez-vous aux tableaux suivants). Vous pouvez aussi sélectionner un réglage à l'aide des touches fléchées (haut/bas).

Remarque! Les réglages d'alimentation et Ug2 doivent être effectués avant les réglages de la géométrie de l'image.



2. Effectuez les réglages à l'aide des touches fléchées (gauche/droite).
3. Appuyez sur la touche OK pour enregistrer la nouvelle valeur.

Remarque !
- *Pour éviter les réglages incomplets, enregistrez chaque réglage en mémoire immédiatement après l'avoir effectué.*
- *Si un réglage doit être effectué séparément pour différents signaux/formats d'image, sélectionnez d'abord le mode d'utilisation normale en appuyant sur la touche TV, puis sélectionnez le signal/format d'image désiré. Pour revenir au mode de service, appuyez sur la touche i.*

Réglage de la géométrie de l'image
Une bordure rouge apparaît autour de la zone de déflexion de l'image pour permettre le réglage des images animées.
Vous pouvez activer/désactiver cette fonction à l'aide de la touche MENU.

Réglages de la géométrie de l'image

Réglage	Code	Nom OSD	Classique 4:3	Balayage progressif 50 Hz 4:3	Large 16:9	Balayage progressif 50 Hz 16:9	VGA 70 Hz	VGA 60 Hz	Remarque!
Amplitude verticale	00	V-AMPL.	X	X			X	X	
Décentrage vertical	01	V-SHIFT	X	X			X	X	
Linéarité verticale	02	V-LINEARITY	X	X			X		
Correction S verticale	03	S-CORR.	X	X			X		
Largeur	04	WIDTH	X	X			X	X	
Phase de déflexion horizontale	05	H-SHIFT	X						Réglez la déflexion au centre de l'écran (pour les écrans VGA uniquement).
Phase de vidéo horizontale	06	PHASE	X						
Suppression de lignes	07	HOR BLANK	X						D'abord trouvez les valeurs du réglage (gauche/droit) à qui le blocage se commence à déplacer sur région rouge, puis réglez le blocage au milieu de ces valeurs du réglage.
Parabole	08	PARABOLA	X	X	X	X	X	X	
Coins supérieurs	09	CORNER UP	X	X			X	X	
Coins inférieurs	10	CORNER LO	X	X			X	X	
Inclinaison	11	BOW	X	X			X		
Déformation trapézoïdale	12	TRAPEZIUM	X	X			X		
Distorsion en parallélogramme	13	ANGLE	X	X			X		

Autres réglages

Réglage	Code	Nom OSD	Remarque!
Tension de la grille-écran	14	G2 DISP.	Réglez la tension Ug2 jusqu'à ce que la valeur 180 ± 20 s'affiche. *Remarque ! N'appuyez pas sur la touche OK si seul le réglage Ug2 est requis.* Si le réglage de la température des couleurs est requis, appuyez sur la touche OK. Vous restaurez ainsi la valeur par défaut des codes 14 à 19 et verrouillez la valeur de référence (17 à 19) du canon le plus élevé.
Amplification rouge Amplification vert Amplification bleu	15 16 17	R GAIN G GAIN B GAIN	Cette procédure est requise, par exemple lorsque le tube cathodique, le module CRT, etc., a été remplacé. Réglez d'abord les valeurs GAIN (zone blanche à 80 nit), puis les valeurs REF (zones noires à 1,5 nit). Vérifiez les valeurs GAIN à nouveau, puis réglez-les encore, le cas échéant.
Référence rouge Référence vert Référence bleu	18 19 20	R REF. G REF. B REF.	Réglage : l'utilisation de la touche MENU modifie l'image grise / image externe et l'utilisation des touches verte et jaune change la valeur de contraste / luminosité.
Oscillateur d'horloge VPU	21	VCO	Ce réglage étant automatique, il suffit généralement d'appuyer sur la touche OK pour enregistrer la valeur. Si l'écran affiche 9999, cela signifie que le réglage ne peut pas fonctionner et qu'une réparation s'impose. *Remarque! Utilisez un signal de 50 Hz standard !*
Limitation de haute tension	22	EHT PROT	Réglez la valeur vers le haut jusqu'à ce que l'image TV s'efface. En même temps, la valeur diminue automatiquement de 60 unités. Appuyez sur la touche OK pour enregistrer le réglage.

Réglage des variables

Réglage	Code	Nom OSD	Remarque
Seuil BCL (limitation du courant de faisceau)	23	BCL THRES	Les valeurs par défaut relatives au tube cathodique sont fournies séparément (CRT dependant adjustments).
Constante de temps BCL	24	BCL TC	
Gain BCL	25	BCL GAIN	
Compensation EHT pour amplitude H	26	EHTH	
Compensation EHT pour phase H	27	EHTH PHA	
Constante de temps pour phase H	28	EHTH TC	
Compensation EHT pour amplitude V	29	EHTV	
Constante de temps pour amplitude H/V	30	EHTV TC	
Seuil pour correct. EHT d'amplitude H/V	31	EHT THRES	
Compensation V avec courants de faisceau plus élevés	32	EHTV2	
Compensation H avec courants de faisceau plus élevés	33	EHTH2	
Seuil des crêtes de blanc	34	Y MAX	
Angles supérieurs (réglage fin)	35	CORN 2 UP	
Angles inférieurs (réglage fin)	36	CORN 2 LO	

Réglages de service

O Bloc d'alimentation

Circuit d'alimentation et de protection

1. Réglez la luminosité et le contraste à un niveau normal. Connectez un voltmètre universel à la cathode **Do16**.

2. Réglez **la tension U1** avec **Po1**. La tension dépend du type de tube cathodique. Reportez-vous à la section "Composants variables".

3. Contrôlez le dispositif de protection à maximum de puissance après toute operation de maintanance dans le circuit principal de l'alimentation. Eteignez le récepteur à l'aide de l'interrupteur principal. Court-circuitez le condensateur **Co36** et maintenez le court-circuit connecté. Allumez le récepteur en appuyant sur l'interrupteur principal. Quand le dispositif de protection à maximum de puissance fonctionne correctement, l'alimentation n'est pas démarré (se tente à démarrer). Eteignez le récepteur à l'aide de l'interrupteur principal. Supprimez le court-circuit et allumez le récepteur en appuyant sur le bouton d'alimentation.

Fonctions de sécurité

L'activation du mode de service désactive les fonctions suivantes :

- Fonction de sécurité horizontale (EHT)
- Contrôle au démarrage : le processeur vidéo **VPC 3230**, Scarabeus **SDA 9400** et le processeur de déflexion **DDP 3310** ne s'initialisent pas correctement.

K Bloc de déflexion horizontale

Linéarité horizontale

Effectuez le réglage avec **Lk1**.

Mise au point

Réglez la luminosité et le contraste à un niveau normal. Utilisez la mire de quadrillage et réglez l'image de façon à obtenir une résolution optimale.

(Tension de la grille-écran) Tension Ug2

La tension Ug2 peut être réglée facilement à l'aide de l'écran. Reportez-vous à la section "Autres réglages" / tension de la grille-écran.

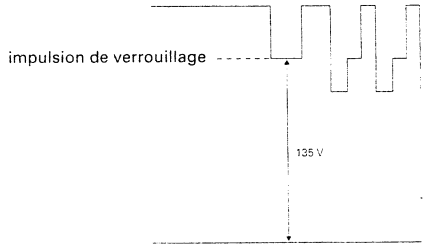
Réglage de la tension Ug2 à l'aide d'un oscilloscope :

1. Réglez la luminosité et la saturation de couleur à un niveau normal et le contraste au minimum.

2. A la fin de la suppression de trame, une impulsion de mesure du niveau de noir (impulsion de verrouillage) apparaît sur **la broche 9** de **ICh1**, **ICh2** et **ICh3**. A l'aide d'un oscilloscope, recherchez la phase de sortie avec la coupure la plus élevée (c'est-à-dire la tension la plus élevée pendant l'impulsion de mesure du niveau de noir).

3. Réglez la tension de l'impulsion de verrouillage de manière à ce qu'elle soit égale à **+135 V** avec Ug2 (reportez-vous à la figure).

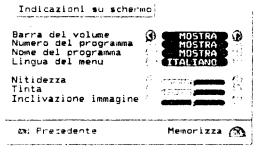
Remarque ! Réglez la tension avec une impulsion de verrouillage.



Istruzioni operative

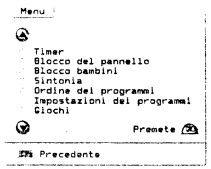
Modifica della lingua dei menu

1. Premere il tasto giallo per selezionare il menu Immagine.
2. Premere il tasto rosso per selezionare il menu Indicazioni su schermo.
3. Selezionare "Lingua del menu" con i tasti freccia (su/giù) e cambiare la lingua desiderata con i tasti freccia (sinistra/destra).
4. Premere il tasto OK per memorizzare le modifiche.



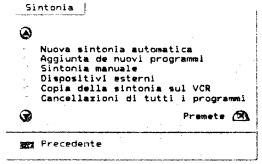
Sintonia manuale

1. Selezionare il numero programma che si desidera sintonizzare.
2. Premere il tasto MENU.
3. Selezionare "Sintonia" con i tasti freccia (su/giù) e premere il tasto OK.
4. Selezionare "Sintonia manuale" con i tasti freccia (su/giù) e premere il tasto OK.
5. Premere il tasto rosso (Ricerca del canale).
6. Premere il tasto OK per memorizzare.
7. Premere il tasto TV per uscire.



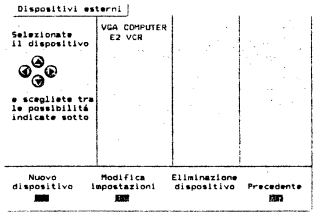
APSi (Automatic Programming System)

1. Premere il tasto MENU.
2. Selezionare "Sintonia" con i tasti freccia e premere il tasto OK.
3. Selezionare "Nuova sintonia automatica" e premere il tasto OK.
4. Per risintonizzare i canali, premere il tasto rosso.
5. Premere il tasto TV per uscire.



Selezione dell'ingresso VGA

1. Premere il tasto MENU.
2. Selezionare "Sintonia" con i tasti freccia e premere il tasto OK.
3. Selezionare "Dispositivi esterni" con i tasti freccia e premere il tasto OK.
4. Selezionare "VGA COMPUTER" con i tasti freccia e premere il tasto TV. Se "VGA COMPUTER" non è presente sull'elenco, selezionare "Nuovo dispositivo" premendo il tasto rosso. Poi selezionare "Computer" con i tasti freccia e premere il tasto OK.

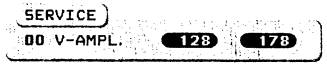


Regolazioni di servizio

Attivazione del modo servizio

Il ricevitore deve essere acceso o in standby quando si attiva il modo servizio.

1. Tenere premuto il tasto ◢- (diminuzione volume) **sul pannello frontale** e contemporaneamente immettere la password: prima MENU e poi TV tramite **telecomando**. Rilasciare il tasto ◢- dopo avere premuto il tasto TV. Se il ricevitore è in standby dopo l'immissione della password, accenderlo premendo il tasto TV.



2. Attivare il modo servizio premendo il tasto i. Sullo schermo verrà visualizzato quanto segue:

Il numero ed il nome della regolazione, i valori relativi all'inizializzazione (sinistra) e alla regolazione (destra) sono indicati sul menu.

3. Uscire dal modo servizio premendo il tasto TV oppure scollegarsi spegnendo il ricevitore tramite l'interruttore generale.

Nota: Il modo servizio resta attivato fino a che il ricevitore non viene spento tramite l'interruttore generale.

Inizializzazione di NVRAM (ICav19)

Nel caso in cui si sostituisca il modulo NVRAM, questo deve essere inizializzato e configurato.

1. Mettere il ricevitore in modo standby. Tenere premuto il tasto ◢- (diminuzione volume) sul telecomando e contemporaneamente immettere la password: MENU, TV e i tramite telecomando. Rilasciare il tasto ◢- dopo avere premuto il tasto TV.
2. Avviare l'inizializzazione specificando il codice premendo questa sequenza di tasti: BLU, 2, 5, 4 e OK. L'inizializzazione dura circa 20 secondi. Il ricevitore si accende automaticamente al termine dell'inizializzazione.
3. Attivare il modo servizio premendo il tasto i.
4. Premere il tasto ROSSO per preconfigurare il ricevitore; vedere anche "Configurazine e diagnostica". Controllare che dopo la configurazione automatica i byte IIC DEV 1-4 e IF OPT corrispondano alla effettiva configurazione del ricevitore).
5. Impostare i byte delle opzioni manuali (TXT OPT, SYS OPT 1 & 2 e DSP OPT) in modo che corrispondano all'effettiva configurazione del ricevitore. Premere il tasto OK per memorizzare le impostazioni.
6. Spegnere il ricevitore tramite l'interruttore generale.
7. Accendere il ricevitore tramite l'interruttore generale e sintonizzare uno o più canali TV.
8. Attivare il modo servizio ed eseguire le necessarie regolazioni.
9. Spegnere il ricevitore tramite l'interruttore generale.

Regolazioni di servizio

Configurazione e diagnostica

Quando si installano o si rimuovono delle opzioni, il ricevitore deve essere configurato. Premendo il tasto ROSSO in modo servizio, il processore verifica la configurazione del ricevitore e mostra le impostazioni sullo schermo. La configurazione può essere memorizzata premendo il tasto OK.

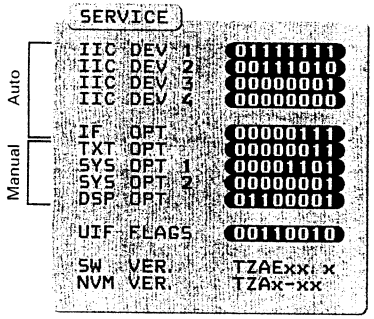
Nota! Scollegare i cavi dalla presa Scart 3 e RCA (uscita linea) prima di configurare il ricevitore.

Questa funzione può essere anche utilizzata nella diagnostica. Se il bit di un'opzione non è '1', quando invece dovrebbe esserlo, l'IC (o funzione) non è presente oppure è in errore.

Nota: I byte IIC DEV 1-4 e IF OPT devono essere configurati automaticamente ogni volta che si preme il tasto ROSSO.
I byte TXT OPT, SYS OPT 1 & 2, DSP OPT e UIF FLAGS devono essere impostati manualmente.

Modifica dei byte di opzione

1. Selezionare il modo configurazione premendo il tasto ROSSO in modo servizio.



SW VER. = versione software µP.
NVM VER. = versione software NVRAM.

2. Selezionare il byte IIC Device 1 - 4, il byte Option 1 - 5 o il byte degli indicatori Uif (Uif flags) con i tasti freccia (su/giù).

3. Il nome del bit selezionato è visibile tramite i tasti freccia (su/giù e sinistra/destra). Il bit selezionato risulta evidenziato.

4. Impostare / annullare i bit tramite i tasti numerici (0...7).

5. Memorizzare le impostazioni premendo il tasto OK.

6. Tornare al normale modo servizio premendo il tasto ROSSO.

Descrizione dei byte di opzione

Bit	Descrizione	Impostazione 7 6 5 4 3 2 1 0	'1'	'0'
	IIC DEV 1	**01101111**		
0	Processore video VPC 3230		Si	No
1	Scarabeus SDA 9400		Si	No
2	Processore deflessione DDP 3310		Si	No
3	Sintonizzatore TV		Si	No
4	Switch video, TEA6415C		Si	No
5	Switch video, TDA6417		Si	No
6	Processore audio MSP341XG		Si	No
7	Subwoofer		Si	No
	IIC DEV 2	**00111010**		
0	Processore audio MSP 3411G		Si	No
1	Megatext SDA5275-3		Si	No
2	4 MB memoria teletext		Si	No
3	16 MB memoria teletext		Si	No
4	Tubo catodico 16:9		Si	No
5	Connessione VGA		Si	No
6	Processore PIP, SDA9489/9589		Si	No
7	Sintonizzatore PIP		Si	No
	IIC DEV 3	**00000001**		
0	Ext 3 installato		Si	No
1	Modulo uscita linea installato		Si	No
2	DDP F6 o più recente		Si	No
3...7	Non in uso		Si	No
	IIC DEV 4	**00000000**		
0...7	Non in uso		Si	No
	IF OPT	**00000000**		
0	B/G IF		Si	No
1	I IF		Si	No
2	D/K IF		Si	No
3	L/L' IF		Si	No
4	Riservato (Impostato su 1, non usato)		Si	No
5	Riservato per NTSC M		Si	No
6...7	Non in uso		Si	No
	TXT OPT	**00000011**		
0	Funzione TOP abilitata		Si	No
1	Funzione FLOF abilitata		Si	No
2...4	Non in uso		Si	No
5	EPG abilitato		Si	No
6	Registrazione EPG abilitata		Si	No
7	Non in uso		Si	No
	SYS OPT 1	**00001101**		
0	Connettore A/V installato		Si	No
1	E1 RGB disabilitato su altri programmi		Si	No
2	ACI abilitato		Si	No
3	Muto portante abilitato		Si	No
4	Loudness abilitata		Si	No
5...7	Non in uso		Si	No
	SYS OPT 2	**00000001**		
0	Regolazione inclinazione		Si	No
1	Avvio con funzioni hotel		Si	No
2...6	Non in uso		Si	No
7	Funzioni TV hotel abilitate		Si	No
	DSP OPT	**00110001**		
0	Bit subwoofer 0		Si	No
1	Bit subwoofer 1		Si	No
2	Livello uscita linea Fissa		Si	No
3	Stato uscita linea virtuale		Si	No
4...7	Non in uso		Si	No
	UIF FLAGS	**00110010**		
0-2	Bit logo 000 = nessun logo, direttamente a APSi 001 = nessun logo, direttamente al menu lingua 011 = Logo Finlux 100 = Logo Salora 101 = Logo Luxor			
3	Prima accensione apparecchio		Si	No
4	Visualizzazione barra volume		Si	No
5	Visualizzazione info programmi		Si	No
6	Blocco pannello frontale		Si	No
7	Timer spegnimento attivo		Si	No

Regolazioni di servizio tramite bus I²C

Tasti del telecomando in modo servizio
Quando il ricevitore è in modo servizio, è possibile selezionare il normale modo TV premendo il tasto TV e tornare al modo servizio premendo il tasto i. Per le regolazioni di servizio, vengono usati i tasti freccia e i tasti numerici. Il tasto OK serve a memorizzare le impostazioni.

Regolazioni per diversi formati immagine
Effettuare tutte le regolazioni con il segnale PAL se non diversamente indicato. Eseguire le regolazioni con formato immagine 4:3 normale (4:3 CLASSIC) e con formato immagine 16:9 (16:9 WIDE). Quindi, eseguire tutte le necessarie regolazioni con altri segnali/formati immagine. Le regolazioni necessarie sono indicate nella tabella di seguito riportata.

Nota: Controllare la configurazione del ricevitore prima di effettuare le regolazioni e procedere solo con quelle effettivamente necessarie.

Come eseguire una regolazione di servizio
1. Specificare un codice a due cifre che definisca una regolazione (ad esempio 04 = larghezza, vedere la tabella che segue) tramite i tasti numerici o selezionare la regolazione che interessa tramite i tasti (su/giù).

Nota: Le regolazioni dell'alimentazione e UG2 devono essere effettuate prima delle regolazioni della geometria dell'immagine.

2. Eseguire le regolazioni con i tasti freccia (sinistra/destra).

3. Memorizzare il nuovo valore premendo il tasto OK.

Nota:
- *Per evitare regolazioni incomplete, memorizzare ciascuna regolazione immediatamente dopo averla effettuata.*
- *Se una regolazione deve essere effettuata in modo diverso per altro segnale/formato immagine, selezionare prima il normale modo TV premendo il tasto TV e poi selezionare il segnale/formato immagine desiderato. Tornare al modo servizio premendo il tasto i.*

Regolazione della geometria dell'immagine
Per semplificare la regolazione della geometria di un'immagine dal vivo, viene visualizzata una cornice rossa attorno all'area di deflessione dell'immagine. E' possibile attivare e disattivare tale cornice con il tasto MENU.

Regolazioni della geometria dell'immagine

Regolazione	Codice	Display	Norm. (4:3)	Scans. progressiva 50 Hz 4:3	Wide (16:9)	Scans. progressiva 50 Hz 16:9	VGA 70 Hz	VGA 60 Hz	Nota!
Ampiezza verticale	00	V-AMPL.	X	X			X	X	
Spostamento centratura verticale	01	V-SHIFT	X	X			X	X	
Linearità verticale	02	V-LINEARITY	X	X			X		
Correzione S verticale	03	S-CORR.	X	X			X		
Larghezza	04	WIDTH	X	X			X	X	
Spostamento orizzontale, deflessione	05	H-SHIFT	X						Regolare la deflessione verso il centro dello schermo (solo VGA).
Fase orizzontale, video	06	PHASE	X						
Spegnimento orizzontale	07	HOR BLANK	X						Cercare i due valori della regolazione nel punto in cui il blanking inizia a tagliare la barra verticale rossa sulla parte destra e sulla parte sinistra dell'immagine. Fissare la regolazione a metà di questi
Parabola	08	PARABOLA	X	X	X	X	X	X	
Angoli superiori	09	CORNER UP	X	X			X	X	
Angoli inferiori	10	CORNER LO	X	X			X	X	
Bow	11	BOW	X	X			X		
Trapezoidale	12	TRAPEZIUM	X	X			X		
Distorsione parallelogramma	13	ANGLE	X	X			X		

Altre regolazioni

Regolazione	Codice	Display	Nota!
Tensione griglia schermo	14	G2 DISP.	Regolare Ug2 finché sullo schermo non compare 180 ± 20. *Nota: Non premere il tasto OK se è necessaria solo la regolazione Ug2.* Se è necessaria la regolazione della temperatura del colore, avviarla da qui premendo il tasto OK. In tal modo, si ripristina il valore predefinito dei codici 14...19 e si blocca il valore di riferimento (17...19) del cannone più alto.
Guadagno rosso Guadagno verde Guadagno blu	15 16 17	R GAIN G GAIN B GAIN	Questa procedura è necessaria quando, ad esempio, si sostituisce il tubo catodico, il modulo CRT, ecc. Per prima cosa regolare i valori di guadagno (GAIN) (area bianca a 80 nit) e poi i valori di riferimento (REF) (area nera a 1,5 nit). Ricontrollare i valori di guadagno (GAIN) e regolarli nuovamente, se necessario.
Riferimento rosso Riferimento verde Riferimento blu	18 19 20	R REF. G REF. B REF.	Regolazione: Premendo il tasto MENU si scambia tra immagine grigia / immagine esterna e premendo i tasti VERDE e GIALLO si cambiano rispettivamente i valori di contrasto / luminosità.
Oscillatore clock VPU	21	VCO	Questa regolazione è automatica; generalmente, basta premere il tasto OK per memorizzare il valore. Se sullo schermo è indicato 9999, la regolazione non ha avuto esito positivo ed è necessaria l'assistenza tecnica. *Nota: Usare il segnale standard 50Hz!*
Limite alta tensione	22	EHT PROT	Aumentare il valore finché l'immagine TV non risulti completamente vuota. Contemporaneamente il valore verrà automaticamente diminuito di 60 step. Fatto ciò, premere il tasto OK per memorizzare la regolazione.

Impostazioni variabili

Regolazione	Codice	Display	Nota!
Soglia BCL (Beam Current Limitation)	23	BCL THRES	I valori predefiniti del cinescopio vengono forniti separatamente (CRT dependant adjustments).
Costante di tempo BCL	24	BCL TC	
Guadagno BCL	25	BCL GAIN	
Compensazione EHT per ampiezza orizzontale	26	EHTH	
Compensazione EHT per fase orizzontale	27	EHTH PHA	
Costante di tempo per fase orizzontale	28	EHTH TC	
Compensazione EHT per ampiezza verticale	29	EHTV	
Costante di tempo per ampiezza O/V	30	EHTV TC	
Soglia correzione EHT per ampiezza O/V	31	EHT THRES	
Compensazione verticale con correnti fascio maggiori	32	EHTV2	
Compensazione orizzontale con correnti fascio maggiori	33	EHTH2	
Limitazione bianco di picco	34	Y MAX	
Angoli superiori (fine)	35	CORN 2 UP	
Angoli inferiori (fine)	36	CORN 2 LO	

DDP3310B-F6

Regolazioni di servizio

O Blocco alimentatore

Tensione di alimentazione e circuito di protezione

1. Impostare luminosità e contrasto sul livello normale. Collegare un voltmetro universale al catodo **Do16**.

2. Regolare **la tensione U1** con **Po1**. La tensione dipende dal tipo di tubo catodico; fare riferimento alla sezione "Componenti variabili".

3. Controllare la protezione di sovraccarico da potenza dopo avere eseguito qualsiasi tipo di intervento tecnico sul circuito primario dell'alimentatore. Spegnere l'apparecchio premendo l'interruttore generale. Cortocircuitare il condensatore **Co36** e mantenere il corto circuito. Quando la protezione di sovraccarico da potenza funziona correttamente, l'alimentatore non si avvierà (proverà ad avviarsi). Spegnere l'apparecchio premendo l'interruttore generale. Rimuovere il cortocircuito ed accendere il ricevitore premendo l'interruttore generale.

Funzioni di sicurezza

L'attivazione del modo servizio disabilita le seguenti funzioni:

- Funzione sicurezza orizzontale (EHT)
- Controlli all'avvio: il processore video **VPC 3230**, Scarabeus **SDA 9400** ed il processore di deflessione **DDP 3310** non si inizializzano correttamente.

K Blocco deflessione orizzontale

Linearità orizzontale

Regolare con **Lk1**.

Messa a fuoco

Impostare luminosità e contrasto sul livello normale. Usare il monoscopio e regolare l'immagine sulla risoluzione ottimale.

(Tensione griglia schermo) tensione Ug2

La tensione Ug2 può essere facilmente regolata con l'aiuto delle informazioni fornite sullo schermo; vedere "Altre regolazioni" / Tensione griglia schermo.

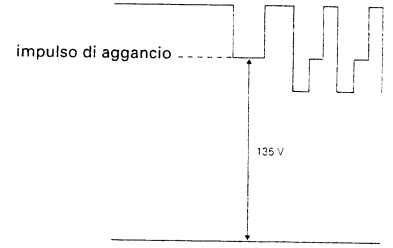
Regolazione Ug2 con oscilloscopio:

1. Impostare la luminosità e la saturazione dei colori sul livello normale ed il contrasto sul livello più basso.

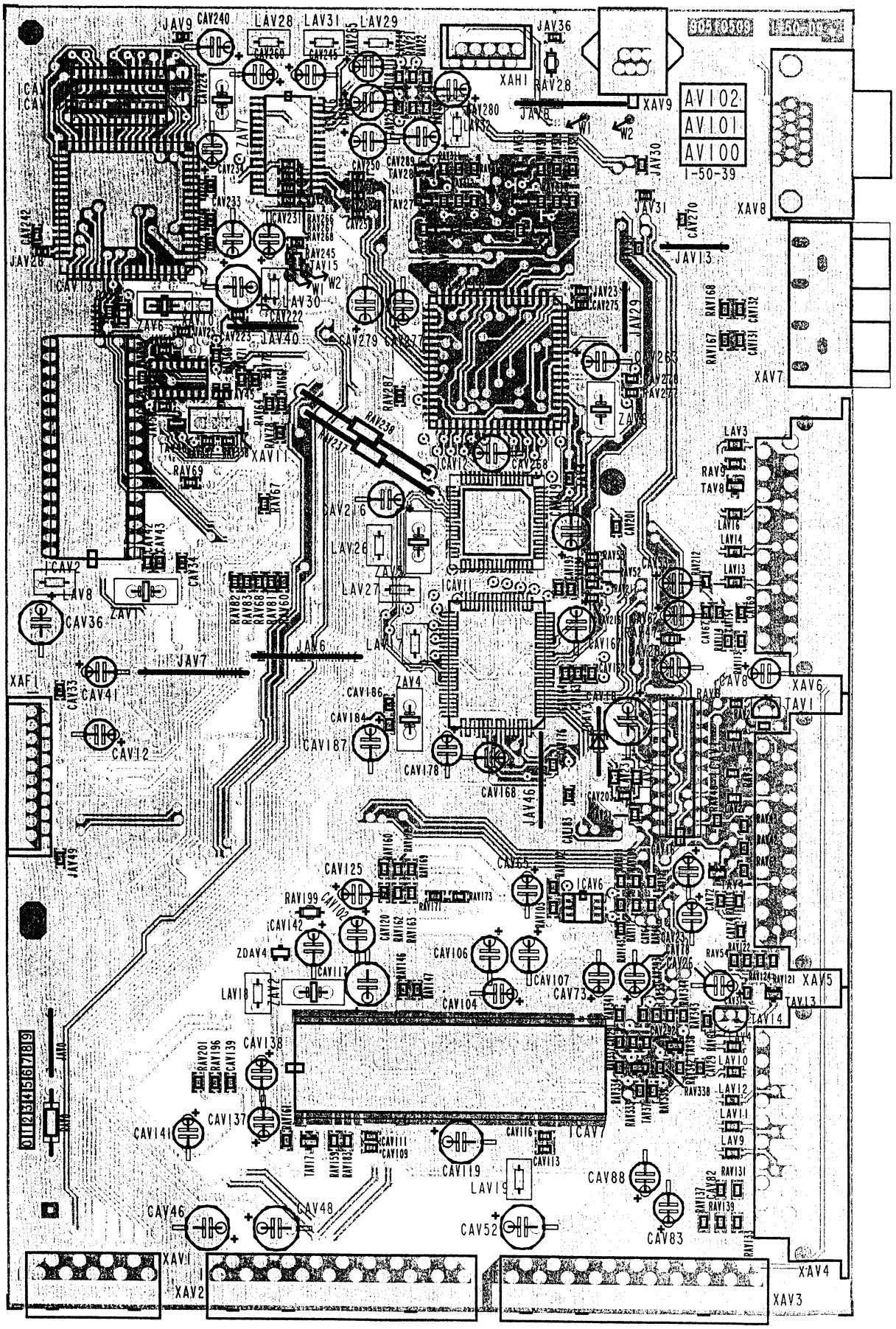
2. Alla fine dello spegnimento verticale, vi è un impulso di misurazione di corrente sul nero (impulso di aggancio) **al piedino 9** di **ICh1**, **ICh2** e **ICh3**. Usare un oscilloscopio ed individuare la fase di uscita con il cut-off più alto (ad esempio, la tensione più alta durante l'impulso di misurazione della corrente sul nero).

3. Regolare la tensione dell'impulso di aggancio più alto su **+135 V** con Ug2 (vedere la figura)

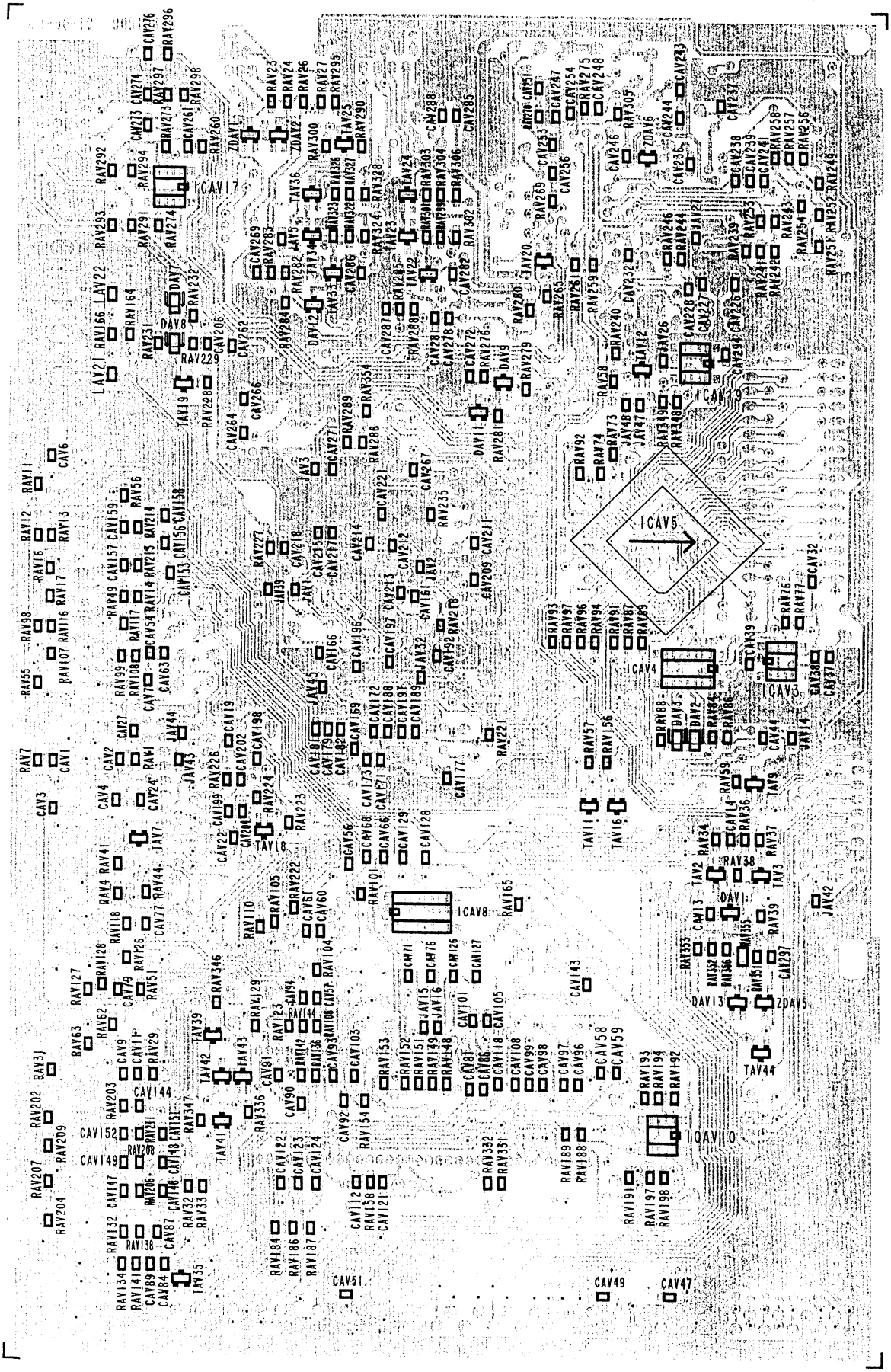
Nota: Regolare la tensione con un impulso di aggancio.



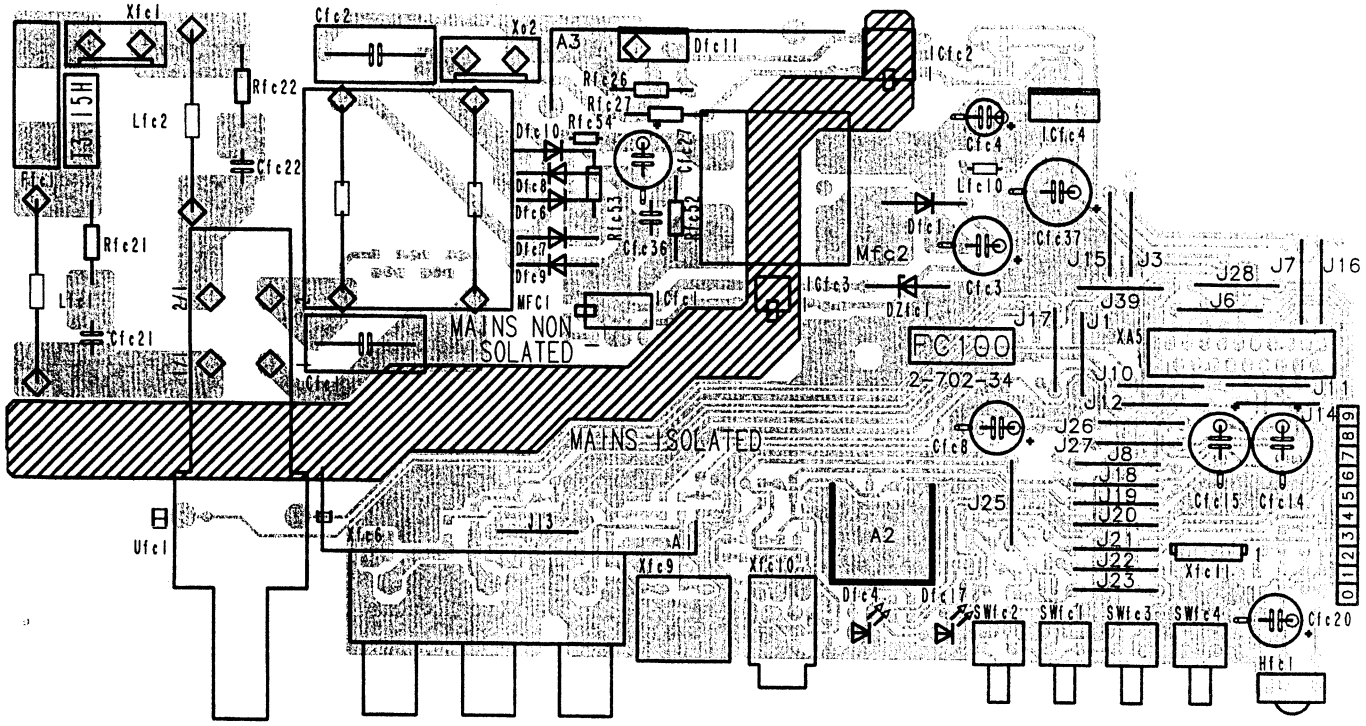
AV***** (AV100) Signal module (version 9)

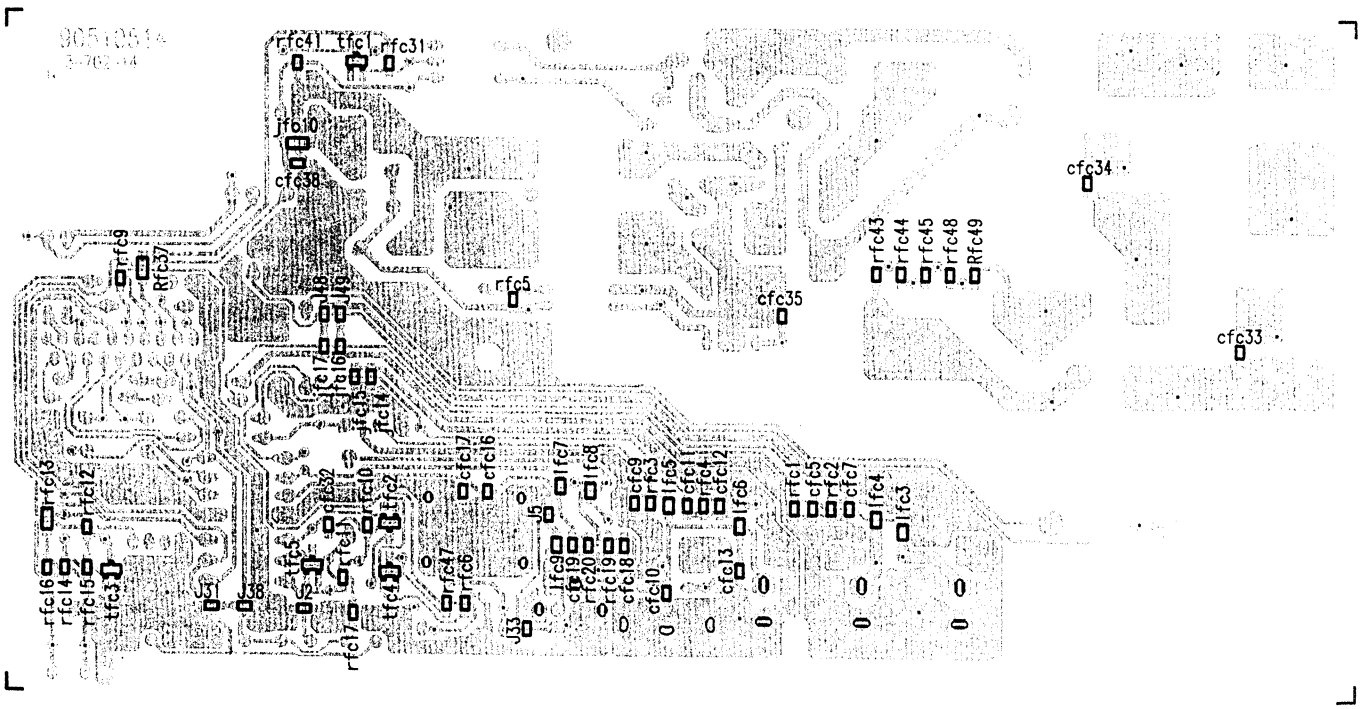


AV***** (AV100) Signal module (version 9)

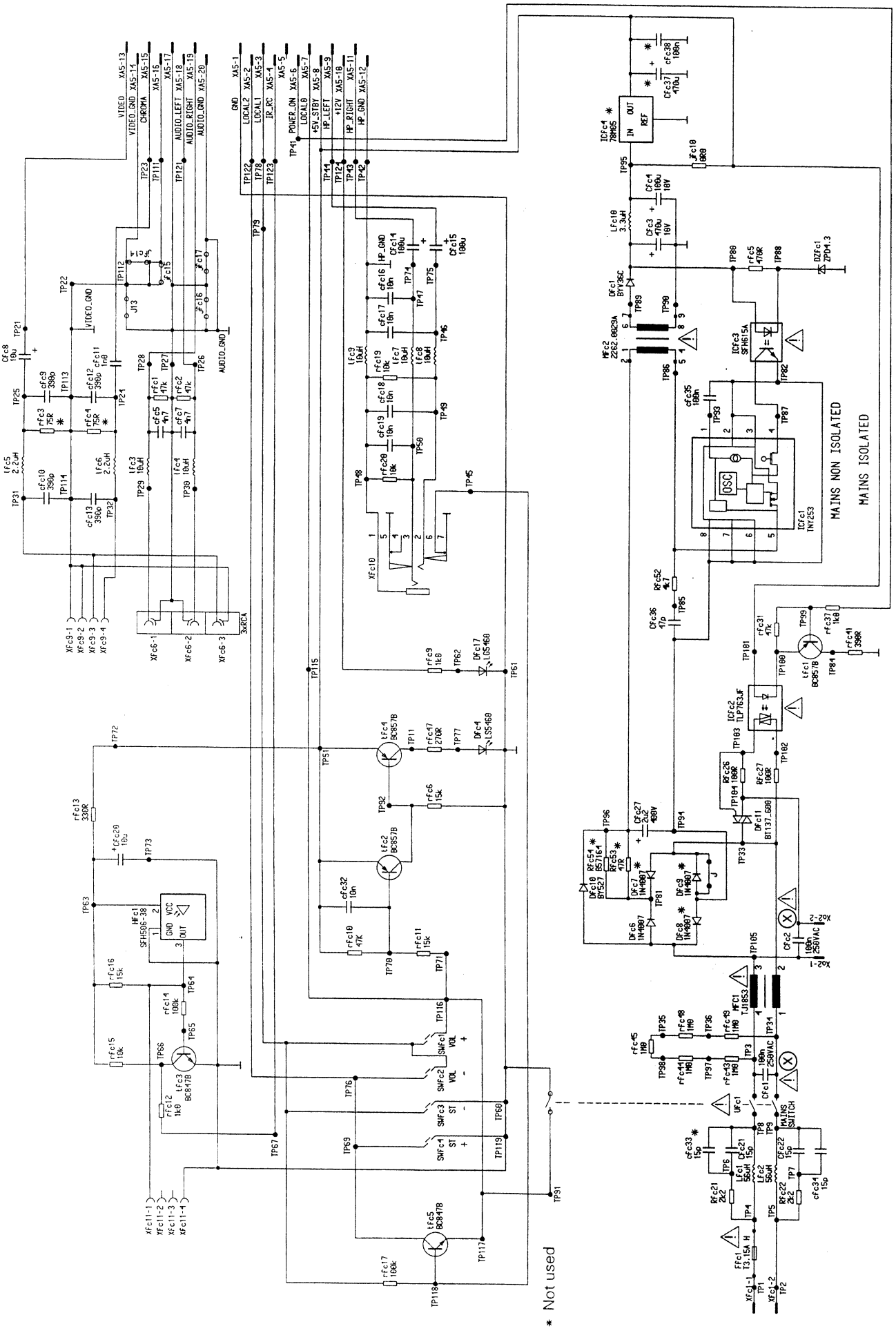


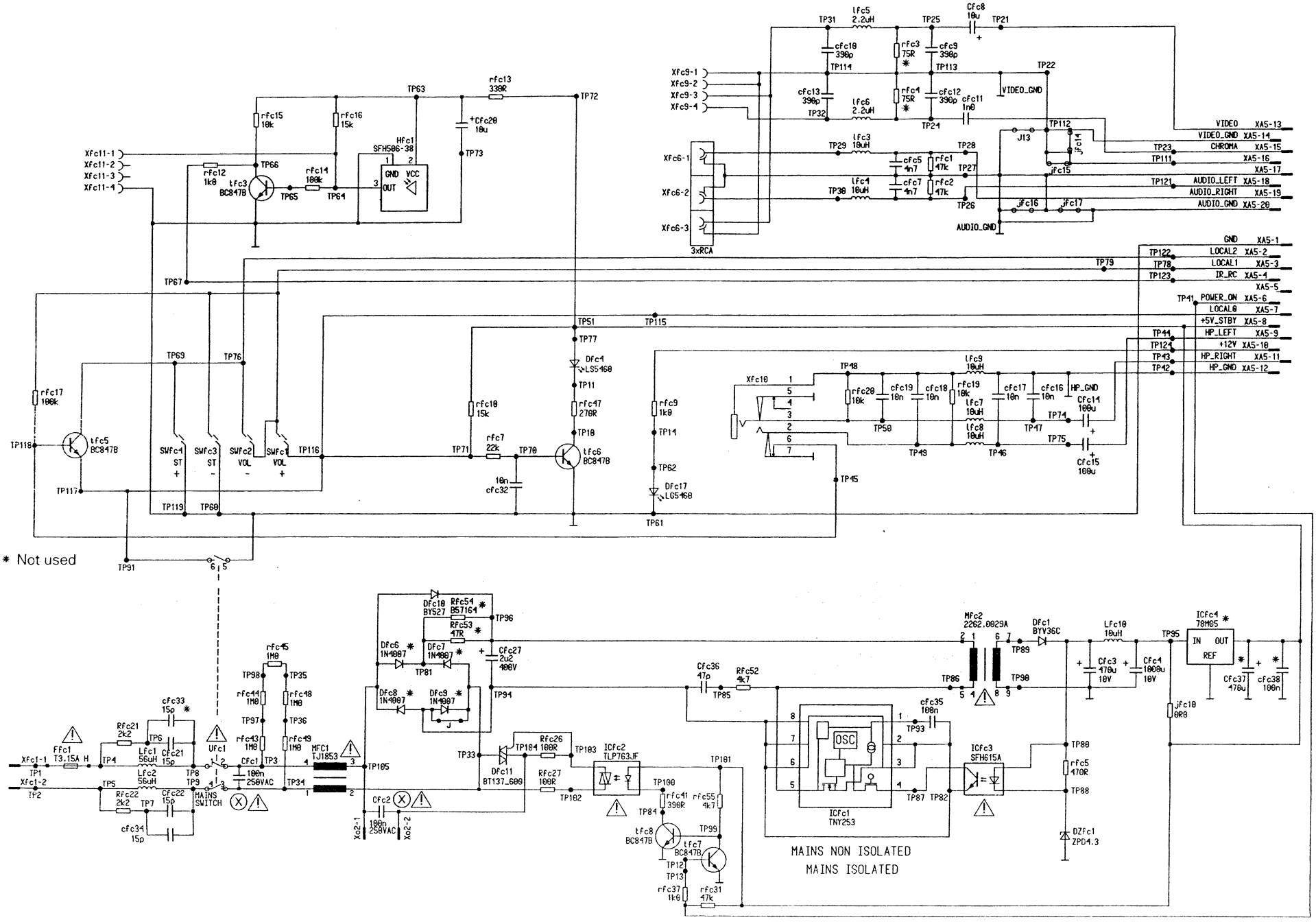
FC100 Control unit module (version 4)



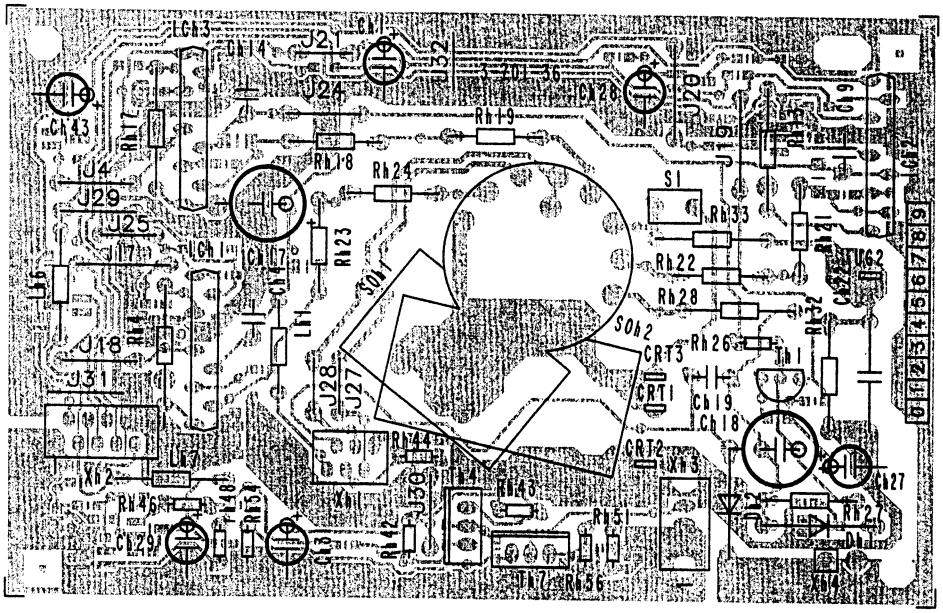


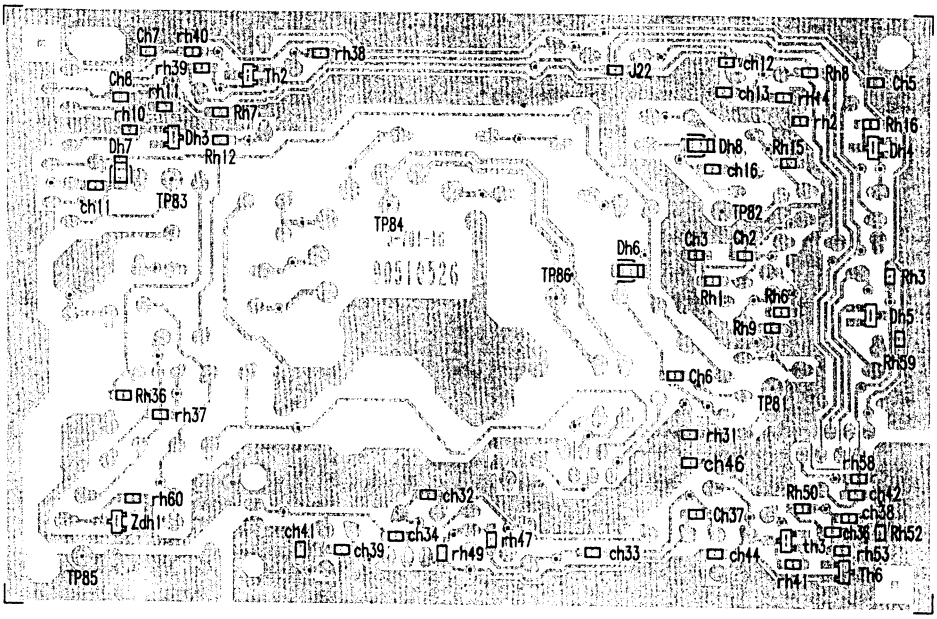
FC100 Control unit module (version 4)

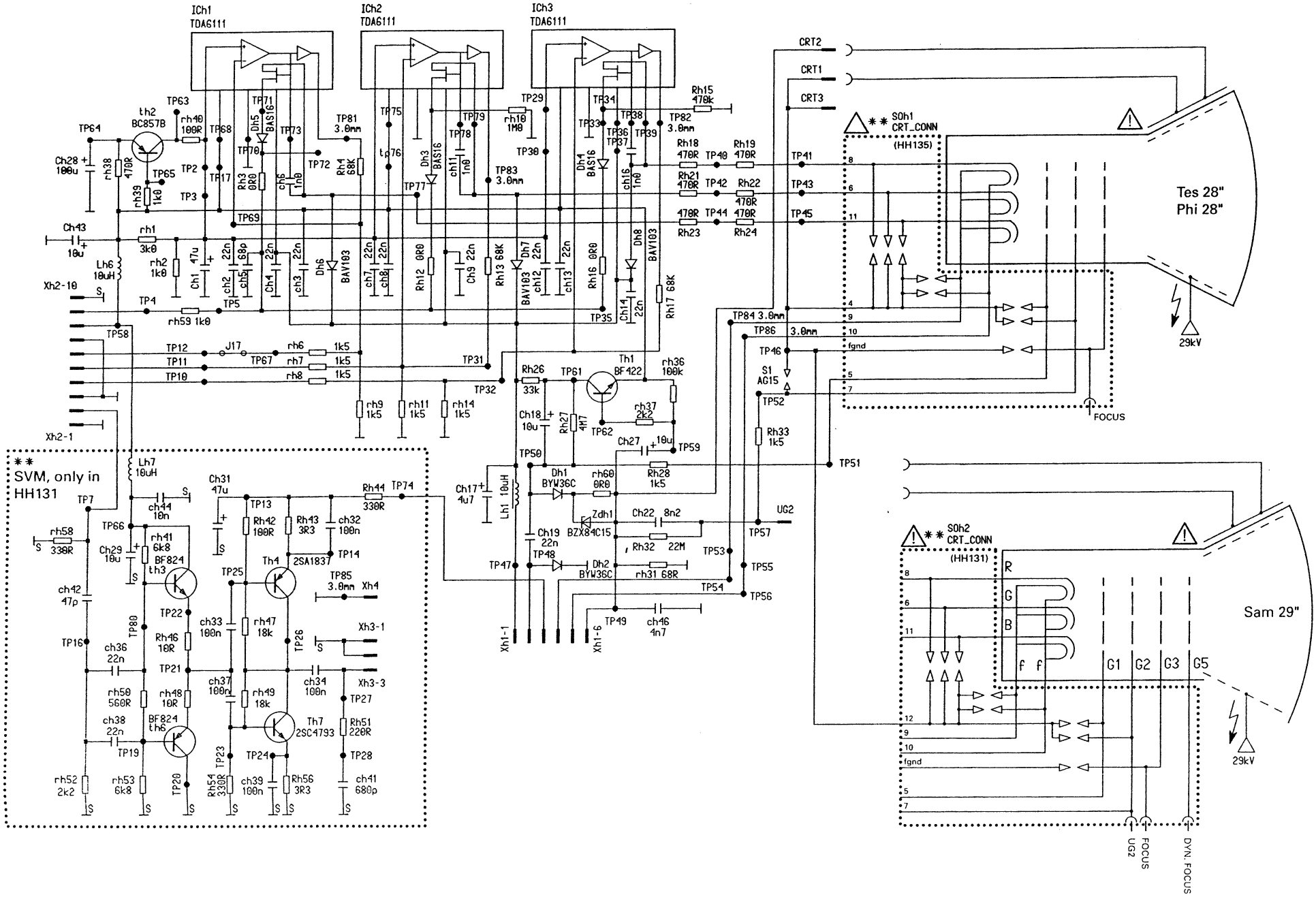



* Not used
MAINS NON ISOLATED
MAINS ISOLATED
3xRCA
VIDEO XA5-13
VIDEO_GND XA5-14
CHROMA XA5-15
XA5-16
XA5-17
AUDIO_LEFT XA5-18
AUDIO_RIGHT XA5-19
AUDIO_GND XA5-20
GND XA5-1
LOCAL2 XA5-2
LOCAL1 XA5-3
IR_RC XA5-4
XA5-5
POWER_ON XA5-6
LOCAL0 XA5-7
+5V_STBY XA5-8
HP_LEFT XA5-9
+12V XA5-10
HP_RIGHT XA5-11
HP_GND XA5-12
OSC
ICfc1 TNY253
ICfc2 TLP763JF
ICfc3 SFH615A
Hfc1 SFH506-38
MFC1 TJ1853
Mfc2 2262.0029A
ICfc4 78M05
Ffc1 T3.15A H
Cfc2 100n 250VAC
DZfc1 ZPD4.3
MAINS SWITCH

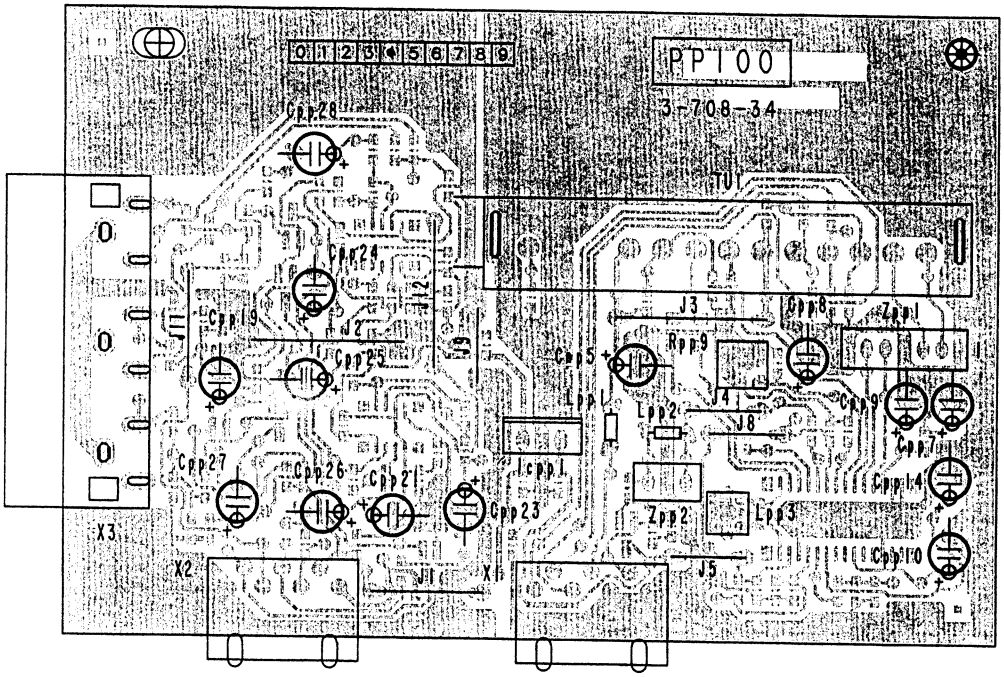
HH131/135 CRT-module (version 6)

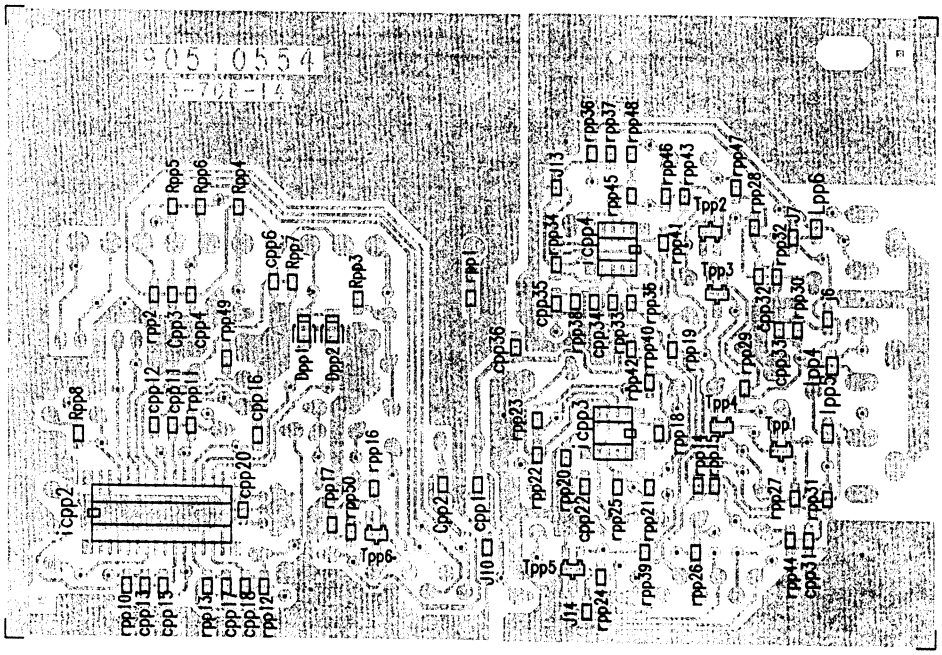


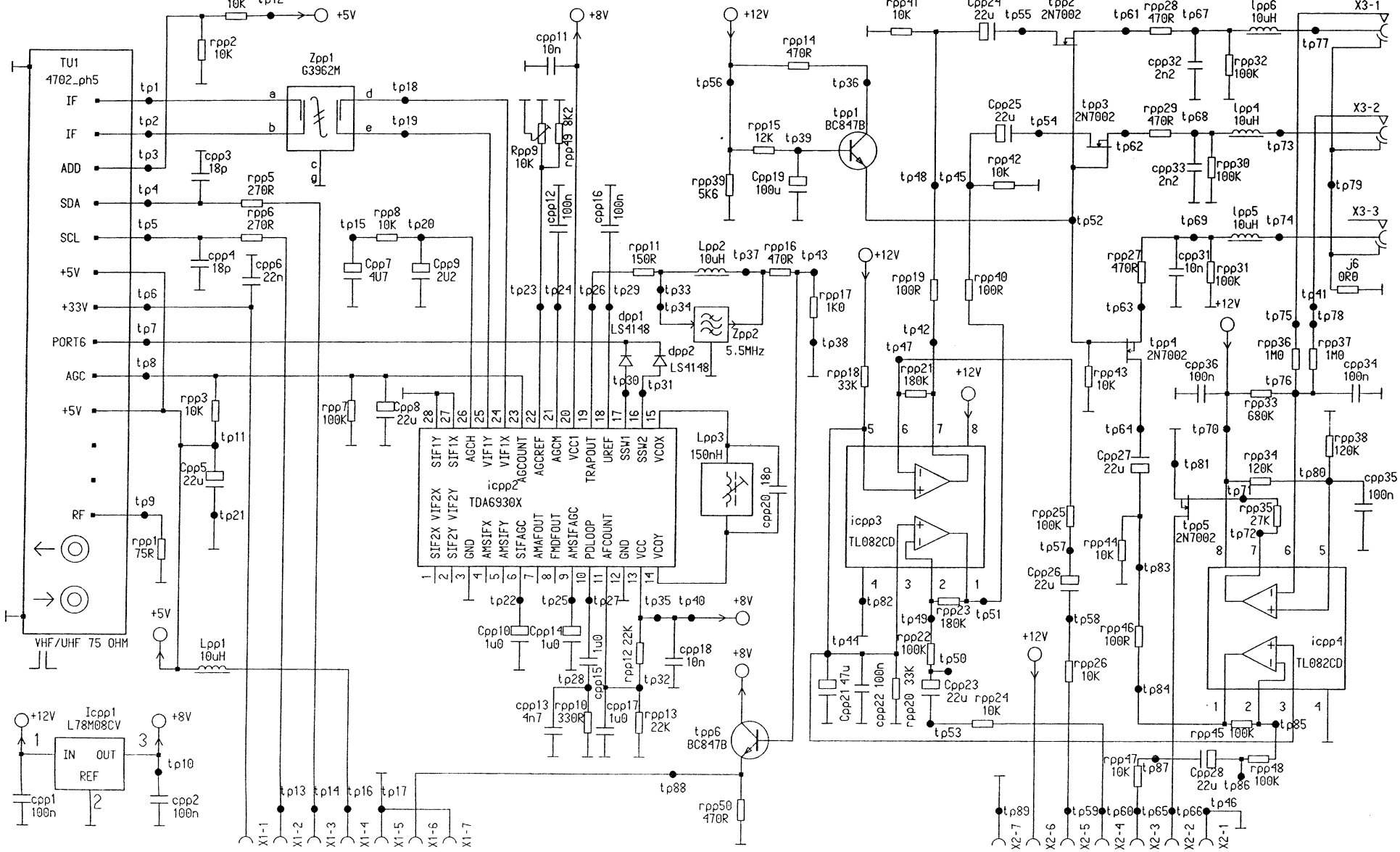



ICh1
TDA6111
ICh2
TDA6111
ICh3
TDA6111
CRT2
CRT1
CRT3
** SOh1
CRT_CONN
(HH135)
Tes 28"
Phi 28"
29kV
FOCUS
** SOh2
CRT_CONN
(HH131)
Sam 29"
29kV
UG2
FOCUS
DYN. FOCUS
** SVM, only in HH131
Th1
BF422
Th4
2SA1837
Th7
2SC4793
BF824
th2
BC857B
Xh2-10
Xh2-1
Xh1-1
Xh1-6
Xh3-1
Xh3-3
Xh4

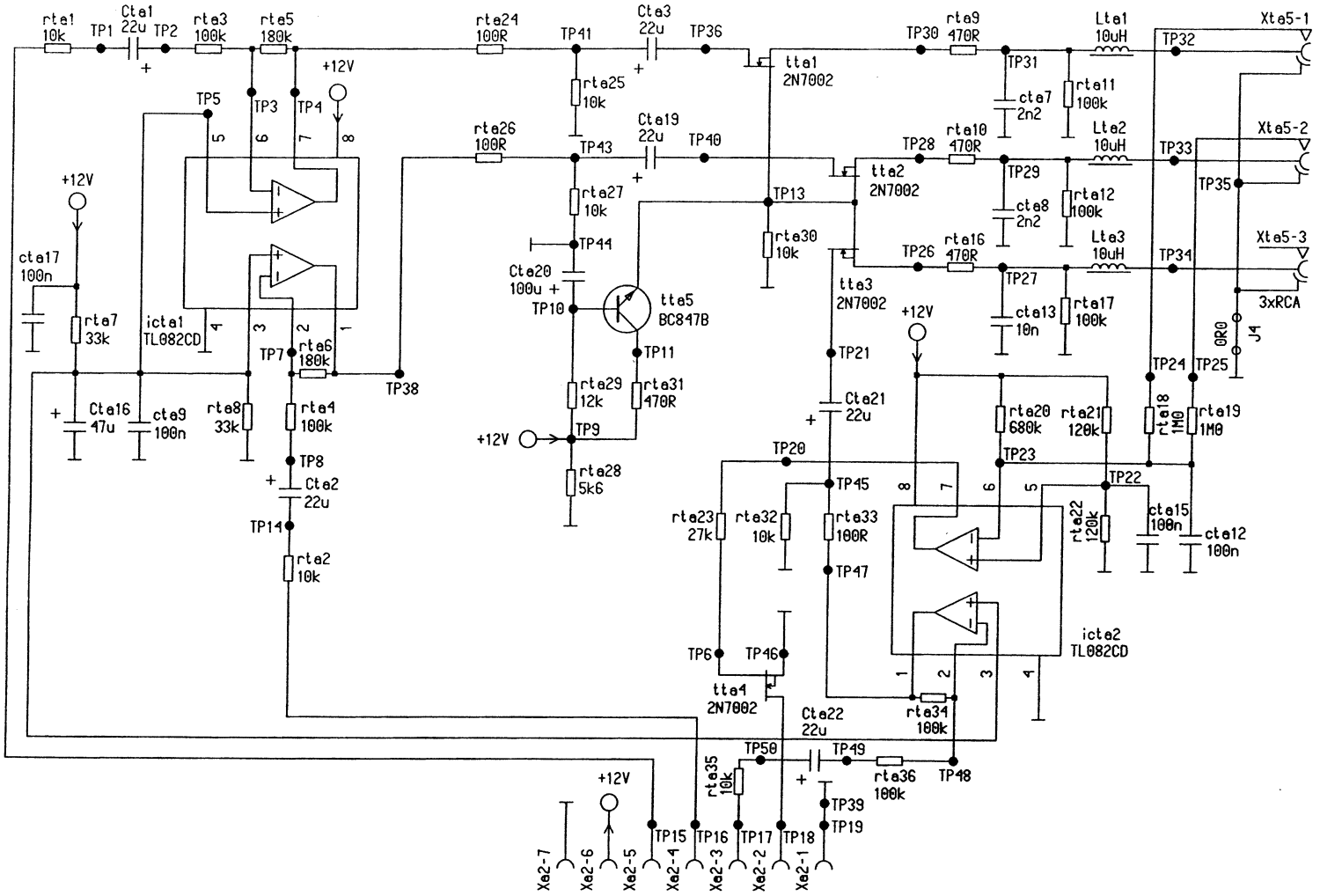
PP100 Twin tuner picture in picture module (version 4)

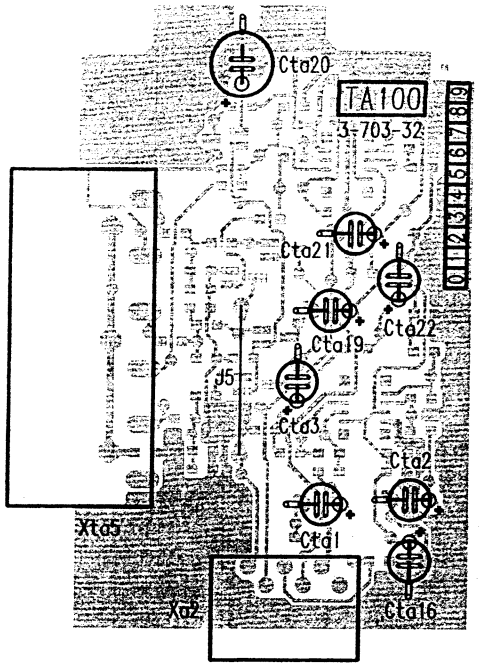


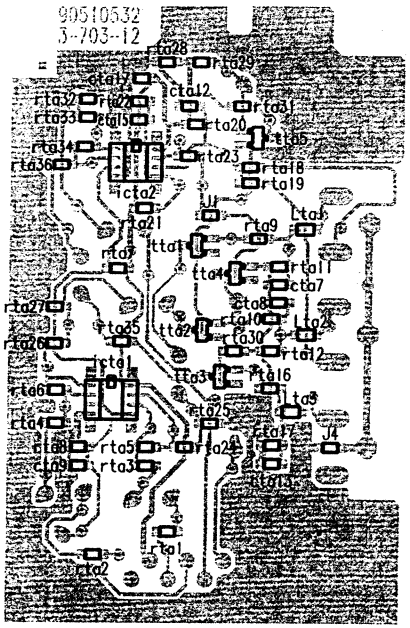



TU1
4702_ph5
IF
IF
ADD
SDA
SCL
+5V
+33V
PORT6
AGC
+5V
RF
VHF/UHF 75 OHM
Zpp1
G3962M
Rpp9
10K
rpp49 8K2
cpp11
10n
cpp12
100n
cpp16
100n
rpp4
10K
rpp2
10K
rpp5
270R
rpp6
270R
cpp3
18p
cpp4
18p
cpp6
22n
rpp8
10K
Cpp7
4U7
Cpp9
2U2
rpp3
10K
Cpp5
22u
rpp1
75R
Lpp1
10uH
rpp7
100K
Cpp8
22u
icpp2
TDA6930X
SIF1Y
SIF1X
AGCH
VIF1Y
VIF1X
AGCOUNT
AGCREF
AGCM
VCC1
TRAPOUT
UREF
SSW1
SSW2
VCOX
SIF2X
VIF2X
SIF2Y
VIF2Y
GND
AMSIFX
AMSIFY
SIFAGC
AMAFOUT
FMDFOUT
AMSIFAGC
PDLOOP
AFCOUNT
GND
VCC
VCOY
Lpp3
150nH
cpp20
18p
Cpp10
1u0
Cpp14
1u0
cpp15
1u0
rpp12 22K
cpp18
10n
cpp13
4n7
rpp10
330R
cpp17
1u0
rpp13
22K
Icpp1
L78M08CV
IN
OUT
REF
cpp1
100n
cpp2
100n
rpp11
150R
Lpp2
10uH
rpp16
470R
dpp1
LS4148
dpp2
LS4148
Zpp2
5.5MHz
rpp17
1K0
rpp18
33K
rpp14
470R
rpp15
12K
Cpp19
100u
rpp39
5K6
tpp1
BC847B
tpp6
BC847B
rpp50
470R
rpp41
10K
Cpp24
22u
tpp2
2N7002
rpp42
10K
Cpp25
22u
tpp3
2N7002
rpp19
100R
rpp40
100R
rpp21
180K
rpp23
180K
icpp3
TL082CD
Cpp21 47u
cpp22 100n
rpp20 33K
Cpp23
22u
rpp24
10K
rpp22
100K
rpp28
470R
rpp29
470R
rpp32
100K
rpp30
100K
cpp32
2n2
cpp33
2n2
lpp6
10uH
lpp4
10uH
lpp5
10uH
X3-1
X3-2
X3-3
J6
0R0
rpp27
470R
cpp31
10n
rpp31
100K
tpp4
2N7002
rpp43
10K
rpp36
1M0
rpp37
1M0
cpp36
100n
cpp34
100n
rpp33
680K
rpp38
120K
rpp34
120K
cpp35
100n
tpp5
2N7002
rpp35
27K
Cpp27
22u
rpp44
10K
rpp25
100K
Cpp26
22u
rpp46
100K
rpp26
10K
icpp4
TL082CD
rpp45 100K
rpp47
10K
Cpp28
22u
rpp48
100K
X1-1
X1-2
X1-3
X1-4
X1-5
X1-6
X1-7
X2-7
X2-6
X2-5
X2-4
X2-3
X2-2
X2-1

TA100 Audio line output module (version 3)







GB Variable components **D Röhrenabhängige Bauteile** **S Komponentskillnader**
F Composants variables **I Componenti che differiscono**

FINLUX

Marketing code	Production code	Chassis	SW version	Design	AV module	Flap	Picture tube type	/ Order no.
71V100 MC 100 Hz	TX71V3RFNAC	TXDRAAA	TZAE14.0	28" V3 MDB	AVACBAA	84501530	28" Tes 4:3 A66EMZ43X51	43642843
	TX71V3RFNAB	TXBRAAA	TZAE14.0	28" V3 MDB	AVACBAA	84501530	28" Phi 4:3 A66EAK075X44	CRT28176
71V102 MC 100 Hz	TX71V3RFNBC	TXDRAAA	TZAE14.0	28" V3 Silver	AVACBAA	84501530	28" Tes 4:3 A66EMZ43X51	43642843
	TX71V3RFNAC	TXBRAAA	TZAE14.0	28" V3 MDB	AVACBAA	84501530	28" Phi 4:3 A66EAK075X44	CRT28176
74X100 MC 100 Hz	TX74X4RFNAR	TXHRAAA	TZAE14.0	29" X4 Silver	AVACBAA	84501540	29" Sam 4:3 A68CQP891X100	43642914
	TX74X4RFNAR	TXHRAAA	TZAE14.0	29" X4 Silver	AVACBAA	84501540	29" Sam 4:3 A68CQP891X239	43642915
74X110 MC 100 Hz	TX74X4RFGAR	TXGRDAA	TZAE14.0	29" X4 Silver	AVCBBAA	84501540	29" Sam 4:3 A68CQP891X100	43642914
	TX74X4RFGAR	TXGRDAA	TZAE14.0	29" X4 Silver	AVCBBAA	84501540	29" Sam 4:3 A68CQP891X239	43642915

LUXOR

Marketing code	Production code	Chassis	SW version	Design	AV module	Flap	Picture tube type	/ Order no.
70FS10Si	TX71B8ELNBC	TXDEAAA	TZAE14.0	28" B8 Silver	AVACBAA	84553510	28" Tes 4:3 A66EMZ43X51	43642843
	TX71B8ELNBB	TXBEAAA	TZAE14.0	28" B8 Silver	AVACBAA	84553510	28" Phi 4:3 A66EAK075X44	CRT28176

SALORA

Marketing code	Production code	Chassis	SW version	Design	AV module	Flap	Picture tube type	/ Order no.
28MC110 100 Hz Champion II	TX71B8RSNBC	TXDRAAA	TZAE14.0	28" B8 Silver	AVACBAA	84553520	28" Tes 4:3 A66EMZ43X51	43642843
	TX71B8RSNBB	TXBRAAA	TZAE14.0	28" B8 Silver	AVACBAA	84553520	28" Phi 4:3 A66EAK075X44	CRT28176
29MC100 100 Hz Gala	TX74X3RSNAR	TXHRAAA	TZAE14.0	29" X3 Silver	AVACBAA	84501550	29" Sam 4:3 A68CQP891X100	43642914
	TX74X3RSNAR	TXHRAAA	TZAE14.0	29" X3 Silver	AVACBAA	84501550	29" Sam 4:3 A68CQP891X239	43642915

Picture tube	Sam 29 4:3 A68QCP 891X100/239		Sam 29 4:3 VGA A68QCP 891X100/239		Tes 28 4:3 A66EMZ 43X51		Phi 28 4:3 A66EAK 075X44	
Mainboard	TXHRAAA		TXGRDAA		TXDRAAA		TXBRAAA	
					TXDEAAA		TXBEAAA	
PW-block	PW-130		PW-131		PW-135		PW-136	
Rk 2	680k	31660062	680k	31660062	-		-	
Rk 14	180k	31660027	180k	31660027	390k	31660059	220k	31660033
Rk 71	4R7	31860002	4R7	31860002	-		-	
Rk 72	1R5	31840004	1R5	31840004	3R0	31850007	3R9	31840006
Rk 73	1R5	31840004	1R5	31840004	3R0	31850007	3R0	31850007
Rk 132	100R	31840002	100R	31840002	-		-	
Rs 5	1R21	31450008	1R21	31450008	1R1	31450013	1R21	31450008
Rs 12	-		-		150R	31430290	-	
Rs 13	820R	31630044	820R	31630044	2k2	31630050	820R	31630044
Rs 14,15,16	820R	31630044	820R	31630044	1k0	31514519	820R	31630044
Rs 17	820R	31630044	820R	31630044	-		820R	31630044
Ck 3	220µF	34229784	220µF	34229784	470µF	34220648	220µF	34229784
Ck 18	1n0	33460028	1n8	33450026	820pF	33450039	820pF	33450039
Ck 27	27nF	33450063	27nF	33450063	30nF	33450064	30nF	33450064
Ck 29	4µ7	33660002	4µ7	33660002	560nF	33460021	560nF	33460021
Ck 32	56nF	33450061	47nF	33450036	56nF	33450061	56nF	33450061
Ck 33	47nF	33450036	47nF	33450036	-		56nF	33450061
Ck 34	220nF	33240834	220nF	33240834	330nF	33450034	300nF	22171302
Ck 36	820pF	33450039	820pF	33450039	-		-	
Zdk 1	BZX55B18	36770008	BZX55B18	36770008	-		-	
Trk 2	DST	45360082	DST	45360082	DST	45360083	DST	45360083
Trk 3	AT4043	45380018	AT4043	45380018	Jumper J 300	15mm	Jumper J 300	15mm
Tro 2	45320063		45320063		45320069		45320069	
Lk 1	FU1206D	45161280	FU1206D	45161280	TU1216	45161282A	FU1206E	45161281
J 108	Jumper 12,5mm		Jumper 12,5mm		1R0	31413904	Jumper 12,5mm	
J 113	Jumper 17,5mm		Jumper 17,5mm		1R0	31413904	Jumper 17,5mm	
J 181	Jumper 20,0mm		Jumper 20,0mm		1R0	31413904	Jumper 20,0mm	
Pk 1	-		-		59M	31280010	59M	31280010
Conn. plate	-		-		84488470		84488470	
HH-DY wire	96010243		96010243		-		-	
CRT module	HH131		HH131		HH135		HH135	
U1 voltage	133V		133V		145V		145V	

(GB) Variable components (D) Röhrenabhängige Bauteile (S) Komponentskillnader
(F) Composants variables (I) Componenti che differiscono

Picture tube	Sam 29 4:3 A68QCP 891X100 /239		Sam 29 4:3 VGA A68QCP 891X100 / 239		Tes 28 4:3 A66EMZ 43X51		Phi 28 4:3 A66EAK 075X44	
Mainboard	TXHRAAA		TXGRDAA		TXDRAAA		TXBRAAA	
					TXDEAAA		TXBEAAA	
PW-block	PW-130		PW-131		PW-135		PW-136	
Multinorm parts (TX*R*)**								
rq 14	470R	31425817	470R	31425817	470R	31425817	470R	31425817
cq 1	56pF	32125526	56pF	32125526	56pF	32125526	56pF	32125526
Jq 10	0R	31425802	0R	31425802	0R	31425802	0R	31425802
TU 1	Temic 4046	58231061	Temic 4046	58231061	Temic 4046	58231061	Temic 4046	58231061
B/G norm parts (TX*E*)**								
cq 1	-		-		2k7	31425821	2k7	31425821
rq 2	-		-		10R	31425820	10R	31425820
rq 13	-		-		15k	31425835	15k	31425835
rq 14	-		-		100R	31425852	100R	31425852
rq 15	-		-		680R	31425860	680R	31425860
rq 17	-		-		1k5	31425826	1k5	31425826
cq 3	-		-		100pF	32125515	100pF	32125515
cq 7,11,12	-		-		27pF	32125509	27pF	32125509
cq 13	-		-		39pF	32125512	39pF	32125512
Lq 2	-		-		33uH	45630014	33uH	45630014
Lq 5	-		-		22uH	45630013	22uH	45630013
TU 1	-		-		Temic 4006	58231063	Temic 4006	58231063
Subwoofer parts (TXD**)**								
ra 3,4,5,8,9	-		33k	31425840	-		-	
ra 6	-		560k	31425896	-		-	
ra 7	-		680k	31490059	-		-	
ra 10,16	-		100k	31425844	-		-	
ra 11	-		3k9	31425830	-		-	
ra 12,17	-		47k	31425836	-		-	
ra 15	-		4k7	31425824	-		-	
ra 20	-		1k5	31425830	-		-	
ra 21,26	-		1k0	31425820	-		-	
ra 23	-		10R	31425810	-		-	
ra 29	-		2k2	31425828	-		-	
ca 3,6,11,12	-		100nF	32190001	-		-	
Ca 4,14	-		22µF	34540021	-		-	
Ca 5	-		1u0	33127108	-		-	
Ca 7	-		470nF	33124503	-		-	
ca 10	-		150nF	32525899	-		-	
ca 15	-		100nF	32536223	-		-	
Ca 18	-		2200µF	34226678	-		-	
ca 23	-		22nF	32536221	-		-	
Ca 29	-		1000µF	34220554	-		-	
ta 1,2,4	-		BC847B	36145312	-		-	
ta 3	-		BC857B	36145412	-		-	
da 1	-		BAS16	36560318	-		-	
zda 2	-		BZX84 12V	36770019	-		-	
Ica 1,2	-		TDA2616	37631259	-		-	
Xa 1	-		3-pin	73190603	-		-	
VGA parts (TXD****								
Rk 85	-		3R3	31850054	-		-	
rk 86,87	-		56k	31425842	-		-	
rk 88	-		220k	31425847	-		-	
rk 89,91	-		1k0	31425820	-		-	
rk 90,92	-		82R	31425882	-		-	
rk 93	-		18R	31425807	-		-	
rk 94	-		27k	31425839	-		-	
rk 95	-		100k	31425844	-		-	
Ck 35	-		1µ0	33124758	-		-	
ck 37	-		100nF	32190001	-		-	
Ck 38,39	-		47µF	34223251	-		-	
Tk 13	-		BC327	36147109	-		-	
Tk 14	-		BC337	36147138	-		-	
tk 18	-		BC847B	36145312	-		-	
tk 15,16,17	-		BC857B	36145412	-		-	
Dk 19,20	-		1N4937	36575353	-		-	
Trk 4	-		TM2624	45350002	-		-	

(GB) Variable components (D) Röhrenabhängige Bauteile (S) Komponentskillnader
(F) Composants variables (I) Componenti che differiscono

AV module	AVCBBAA PIP / VGA / 3.SCART 3D-SOUND		AVACBAA 2.SCART	
PIP parts				
Rav 18, 21	470R	31425817	-	-
Rav 19, 22, 269	330R	31425857	-	-
Rav 55	0R0	31425802	-	-
Rav 259, 261	100R	31425852	-	-
Rav 264, 266, 267, 268	-	-	0R	31425802
Cav 27	220nF	32525900	-	-
Cav 240, 250, 255	10µF	34540025	-	-
Cav 243, 244	10pF	32125506	-	-
Cav 245	1µ0	34540022	-	-
Cav 246, 247, 248, 249, 251, 252, 253, 254, 256	10nF	32536213	-	-
Cav 260, 265	2µ2	34540023	-	-
ICav 16	SDA9489x	37850225	-	-
Lav 28, 29, 31	10µH	45571699	-	-
Zav 7	20,25MHz	45730011	-	-
VGA parts				
Jav 15, 16	-	-	0R	31425802
Rav 156	10R	31425810	10k	31425833
Rav 159, 260	47k	31425836	-	-
Rav 161, 273	10k	31425833	-	-
Rav 162, 163, 169, 171, 172, 173, 274	100k	31425844	-	-
Rav 164, 166	470R	31425817	-	-
Rav 167, 168	33k	31425840	-	-
Rav 227, 293, 294	100R	31425852	-	-
Rav 228, 291, 292	1k	31425820	-	-
Rav 229	560R	31425818	-	-
Rav 231	2k2	31425828	-	-
Rav 232	270R	31425855	-	-
Rav 296, 297, 298	75R	31425861	-	-
Cav 109	390pF	32145428	-	-
Cav 126, 127, 128, 129	330nF	32525901	-	-
Cav 131, 132, 273, 274, 276	10nF	32536213	-	-
Cav 201	680nF	32525905	-	-
Cav 206	47pF	32125508	-	-
Cav 261	100nF	32190001	-	-
Tav 17, 19	BC847B	36145312	-	-
Dav 7, 8	LS4148	36560311	-	-
Icav 8	CD4052B	37810014	-	-
Icav 17	24LC21	37866003	-	-
Lav 21, 22	10µH	45640026	-	-
Xav 7	2xRCA	41910013	VGA Bracket	84481920
Xav 8	15-PIN VGA	41720017	-	-
3. Scart parts				
Rav 9, 11, 12, 13, 16, 17, 212, 213, 214	75R	31425861	-	-
Rav 14	15k	31425835	-	-
Rav 49	10k	31425833	-	-
Rav 56	22k	31425837	-	-
Rav 59	4k7	31425824	-	-
Rav 86	47k	31425836	-	-
Rav 98, 107, 113, 116	100k	31425844	-	-
Rav 99, 108, 114, 117	470R	31425817	-	-
Rav 101, 102, 109, 111	220R	31425815	-	-
Rav 103, 104, 112, 143	220k	31425847	-	-
Rav 106, 144	100R	31425852	-	-
Cav 6, 67, 69	390pF	32145428	-	-
Cav 8	2µ2	34540023	-	-
Cav 12	10µF	34540025	-	-
Cav 53, 62	22µF	34540021	-	-
Cav 54, 63	1n0	32125545	-	-
Cav 56, 64	10nF	32536213	-	-
Cav 57, 66, 68, 94	330nF	32525901	-	-
Cav 61	100nF	32190001	-	-
Cav 153, 156, 158	220nF	32525900	-	-
Cav 154, 157, 159	330pF	32125517	-	-
Tav 8, 9	BC847B	36145312	-	-
ICav 6	MC33078	37470007	-	-
Lav 3	2µ2	45640023	-	-
Lav 13, 14, 16	3µ3	45640024	-	-
Xav 6	SCART 3	41910005	-	-
Sound processor				
Icav 7	MSP3411G	37430035	MSP3410G	37430023

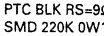
(GB) Spare parts (D) Ersatzteile (S) Reservdelar
(F) Pièces de rechange (I) Parti di ricambio

Note! Hinweis! Obs! Remarque ! Nota!

⚠ Safety components in accordance with existing safety regulations. These components must be replaced only with original parts.
⚠ Sicherheitsbauteil im Sinn der Sicherheitsbestimmung. Diese Teile dürfen nur durch Originalteile ersetzt werden.
⚠ Skyddskomponenter. Dessa komponenter får endast ersättas med original reservdelar.
⚠ Composant de sécurité conformément aux règlementations de sécurité. Ces composants doivent être uniquement remplacés par des pièces d'origines.
⚠ Componenti di sicurezza ai sensi del regolamento di sicurezza. Queste componenti devono venir sostituite unicamente con parti originali.

* Version components
* Röhrenabhängige Bauteile
* Komponentskillnad
* Composants variables
* Componenti che differiscono

Main board TX*****

Item		Description	Order no.
RESISTORS			
CQ	1*	R SMD 2K7 0W10	31425821
J	33, 301	R SMD 0R 0W10	31425802
J	108*, 113*, 181*	R METOX AX 1R0 0W7	31413904B
JQ	10*	R SMD 0R 0W10	31425802
RA	2. 23*, 24, 25	R SMD 10R 0W10	31425810
RA	3*, 4*, 5*, 8*, 9*	R SMD 33K 0W10	31425840
RA	6*	R SMD 560K 0W10	31425896
RA	7*	R SMD 680K 0W10	31490059
RA	10*, 16*	R SMD 100K 0W10	31425844
RA	11*	R SMD 3K9 0W10	31425830
RA	12*, 17*	R SMD 47K 0W10	31425836
RA	13, 14, 19	R SMD 10K 0W10	31425833
RA	15*, 30, 31	R SMD 4K7 0W10	31425824
RA	18 ⚠	R METOX BK 1R0 4W0	31430013
RA	20*	R SMD 1K5 0W10	31425826
RA	21*, 22, 26*	R SMD 1K0 0W10	31425820
RA	27, 28, 29*	R SMD 2K2 0W10	31425828
RK	1, 44	R SMD 100R 0W10	31425852
RK	2*	R CARF RAD 680K 0W25	31548989
RK	3, 5, 10, 12, 56, 57	R SMD 2K7 0W10	31425821
RK	4, 52, 53, 59, 61, 95*	R SMD 100K 0W10	31425844
RK	6	R SMD 2K20 0W10	31490098
RK	7, 11, 133	R SMD 10K 0W10	31425833
RK	8	R CARF RAD 15K 5% 0W25	31630033
RK	9	R SMD 430R 0W10	31425879
RK	13	R SMD 3K3 0W10	31425829
RK	14*	R CARF AX 180K 5% 0W25	31660027
RK	14*	R CARF AX 220K 5% 0W25	31660033
RK	14*	R CARF AX 390K 0W25	31660059
RK	15	R SMD 5K1 0W10	31490453
RK	16	R SMD 15K 0W10	31425835
RK	18	R SMD 150R 0W10	31425812
RK	20	R SMD 10R 0W10	31425810
RK	22 ⚠	R FUS RAD 2R2 5% 0W25	31860003
RK	23, 25	JUMPER 15mm	85700150
RK	23-1 ⚠, 23-2 ⚠, 25-1 ⚠, 25-2 ⚠	CONN CRIPLET 1,9mm	41930009
RK	30 ⚠	HK-RESISTOR 120R 5%	13100232
RK	31, 33, 38, 39, 42	R SMD 2K00 0W10	31490003
RK	32, 49, 89*, 91*	R SMD 1K0 0W10	31425820
RK	46, 47	R SMD 820R 0W10	31425819
RK	48	R SMD 470R 0W10	31425817
RK	50	R METOX BK 0R47 1W5	31430011
RK	51, 82	R SMD 2K2 0W10	31425828
RK	54	R SMD 4K7 0W10	31425824
RK	55 ⚠	R CARF RAD 0R22 5% 0W25	31514506
RK	58	R METOX BK 0R33 1W5	31430010
RK	62	R CARF AX 27R 5% 0W25	31660007
RK	63 ⚠, 68 ⚠	R FUS RD 0R1 0W40	31850059
RK	64 ⚠	R FUS RAD 27R 5% 0W25	31860001
RK	65, 67	R CARF RAD 6K8 5% 0W25	31630029
RK	66 ⚠	R FUS AX 0R47 5% 0W5	31850004
RK	66-1, 66-2	CONN CRIPLET 1,3mm	41930008
RK	69	R SMD 1M0 0W10	31425801
RK	70, 77	R CARF RAD 100K 5% 0W25	31630037
RK	71 ⚠*	R FUS RAD 4R7 5% 0W25	31860002
RK	72 ⚠*, 73 ⚠*	R FUS BK 1R5 0W70	31840004
RK	72 ⚠*, 73 ⚠*	R FUS AX 3R0 0W50	31850007
RK	72 ⚠*	R FUS BK 3R9 0W70	31840006
RK	75 ⚠	R CARF AX 1R5 5% 0W5	31630014
RK	76 ⚠	R FUS AX 2R2 0W50	31850056
RK	81	R CARF AX 39K 0W25	31660054
RK	83 ⚠	R FUS BLK 390R 10% 1W0	31850002
RK	85 ⚠*	R FUS RAD 3R3 5% 0W25	31850054
RK	86*, 87*	R SMD 56K 0W10	31425842
RK	88*	R SMD 220K 0W10	31425847
RK	90*, 92*	R SMD 82R 0W10	31425882
RK	93*	R SMD 18R 0W10	31425807
RK	94*	R SMD 27K 0W10	31425839
RK	103	JUMPER 12,5mm	85700125
RK	132 ⚠*	R FUS BLK 100R 10% 1W0	31840002
RO	1 ⚠	R PTC BLK RS=9Ω	31930011
RO	2, 3, 60	R SMD 220K 0W10	31490457
RO	4	R SMD 270K 0W10	31490458
RO	5	R SMD 2K7 0W10	31425821
RO	6, 16	R SMD 24K3 0W10	31490451
RO	8	R SMD 6K8 0W10	31425831
RO	9	R SMD 18K 0W10	31425813
RO	10, 11, 12, 14	R SMD 1M0 0W10	31425801
RO	13	R METOX AX 2K7 2W0	31414050A
RO	15, 17	R SMD2 0W10	31425887
RO	18, 35	R SMD 2K2 0W10	31425828
RO	24	R SMD 1K0 0W10	31425820
RO	25	R SMD 150R 0W10	31425812
RO	26	R METF AX 0R68 0W60	31440061
RO	28	R CARF BLK 560R 0W50 AX	31650003
RO	30	R SMD 1K8 0W10	31425827
RO	32 ⚠	R METF AX 10M 0W50 HV	31460001
RO	33	R SMD 820R 0W10	31425819
RO	38, 39, 40, 41	R SMD 82R 0W10	31425882
RO	43	R SMD 33K 0W10	31425840
RO	49	R SMD 150K 0W10	31425846
RO	51	R SMD 180K 0W10	31490012
RO	53	R SMD 10K 0W10	31425833
RO	54	R SMD 5K1 0W10	31490453
RO	55	R CARF AX 1K5 5% 0W25	31660017
RO	58	R SMD 100K 0W10	31425844
RO	59	R WRLAC AX 0R18 5% 2W5	31360046B
RO	59-1 ⚠, 59-2 ⚠	CONN CRIPLET 1,3mm	41930008
RO	61	R SMD 470R 0W10	31425817
RO	62	R CARF AX 2K2 0W25	31548618
RO	67	JUMPER 5mm	85700050
RQ	1	R SMD 22K 0W10	31425837
RQ	2*	R SMD 10R 0W10	31425810
RQ	3, 4, 5, 6, 7	R SMD 4K7 0W10	31425824
RQ	12	R SMD 330R 0W10	31425857
RQ	13*	R SMD 15K 0W10	31425835
RQ	14*	R SMD 100R 0W10	31425852
RQ	14*	R SMD 470R 0W10	31425817
RQ	15*	R SMD 680R 0W10	31425860
RQ	16	R SMD 1K0 0W10	31425820
RQ	17*	R SMD 1K5 0W10	31425826
RS	1	R SMD 2K2 0W10	31425828
RS	2	R SMD 1K5 0W10	31425826
RS	3	R METF RAD 1R54 1% 0W60	31450012
RS	4	R SMD 270K 0W10	31425805
RS	5*	R METF RAD 1R10 0W60	31450013
RS	5*, 8	R METF RAD 1R21 1% 0W60	31450008
RS	9	R CARF RAD 27R 5% 0W25	31630021
RS	10, 11	R SMD 12R 0W10	31490058
RS	12*	R METOX BK 150R 2W0	31430290
RS	13*	R CARF RAD 2K2 5% 0W25	31630050
RS	13*, 14*, 15*, 16*, 17*	R CARF RAD 820R 5% 0W25	31630044
RS	14*, 15*, 16*	R CARF RAD 1K0 5% 0W25	31514519
RS	21	R SMD 10K 0W10	31425833
RS	22	R SMD 47K 0W10	31425836
RS	23	R SMD 12K1 0W10	31490051
RS	24, 27	R SMD 5K11 0W10	31490454
RS	25, 26	R SMD 6K8 0W10	31425831
CAPACITORS			
CA	1, 2	CMKT RAD 220nF 63V	33127108
CA	3*, 6*, 11*, 12*, 13	C CER2 SMD 100nF 25V	32190001
CA	4*, 14*, 17	C ECAP RAD 22µF 35V	34540021
CA	5*	C ECAP RAD 1µF 63V	34540022
CA	7*	CMKT RAD 470nF 63V	33124503
CA	8, 9	C CER1 SMD 390pF 50V	32145428
CA	10*	C CER2 SMD 150nF 16V	32525899
CA	15*, 19	C CER2 SMD 100nF 50V	32536223
CA	18*, 20	C ECAP BLK 2200µF 35V	34226678
CA	21, 22, 23*	C CER2 SMD 22nF 50V	32536221
CA	24, 25	C ECAP BLK 470µF 35V	34220648
CA	29*	C ECAP BLK 1000µF 35V	34220554
CK	1	C CER1 SMD 220pF 50V	32125513
CK	2, 41	C CER2 SMD 10nF 50V	32536213
CK	3*, 6	C ECAP RAD 220µF 25V	34229784
CK	3*	C ECAP BLK 470µF 35V	34220648
CK	4	CMKT RAD 1µ5 63V	33120948
CK	5	CMKT RAD 100nF 63V	33127106
CK	9	C CER1 SMD 56pF 50V	32125526
CK	10, 28	CMKT RAD 220nF 63V	33127108
CK	12	C ECAP RAD 100µF 16V	34223252
CK	13	C CER1 SMD 330pF 50V	32125517
CK	14	C ECAP RAD 47µF 63V	34540053
CK	15	C ECAP BLK 2200µF 25V	34510005
CK	16	CMKT RAD 22nF 400V	33150965
CK	17 ⚠, 23 ⚠	CMKC BLK 330nF 250V	33660001
CK	24	CMKP BLK 470pF 1K6V	33460011
CK	18*, 36*	CMKP BLK 820pF 1K5V	33450039
CK	18*	CMKP BLK 1nF 1K6V	33460028
CK	18*	CMKP BLK 1n8 1K6V	33460026
CK	18-1 ⚠, 18-2 ⚠, 24-1 ⚠, 24-2 ⚠, 36-1 ⚠, 36-2 ⚠	CONN CRIPLET 1,3mm	41930008
CK	19	C ECAP BLK 4µ7 250V HV	34610001
CK	20	CMKT BLK 100nF 250V	33360003
CK	21	C CER2/3 RAD 2n2 20% 500V	32780003
CK	22	C CER2/3 RAD 330pF 10% 500V	32780002
CK	25	CMKP BLK 15nF 100V	33460003
CK	26 ⚠	CMKP BLK 10nF 1K6V	33450037
CK	26-1 ⚠, 26-2 ⚠	CONN CRIPLET 1,9mm	41930009
CK	27 ⚠*	CMKP BLK 27nF 630V	33450063
CK	27 ⚠*	CMKP BLK 30nF 3,5% 630V	33450064
CK	27-1 ⚠, 27-2 ⚠	CONN CRIPLET 1,9mm	41930009
CK	29 ⚠*	CMKP BLK 560nF 250V	33460021
CK	29 ⚠*	CMKC BLK 4µ7 63V	33660002
CK	29-1 ⚠, 29-2 ⚠	CONN CRIPLET 1,9mm	41930009
CK	30	CMKT RAD 470nF 63V	33127123
CK	30-1 ⚠, 30-2 ⚠	CONN CRIPLET 1,3mm	41930008
CK	31-1 ⚠, 31-2 ⚠	CONN CRIPLET 1,9mm	41930009
CK	32*, 33 ⚠*	CMKP BLK 47nF 400V	33450036
CK	32*	CMKP BLK 56nF 400V	33450061
CK	32-1 ⚠, 32-2 ⚠, 33-1 ⚠, 33-2 ⚠	CONN CRIPLET 1,3mm	41930008
CK	33 ⚠*	C M(KP) BLK 56nF 400V	33450061
CK	34 ⚠*	CMKP BLK 220nF 250V	33240834
CK	34 ⚠*	C MKP10 300nF 5% 250V	22171302
CK	34 ⚠*	CMKP BLK 330nF 250V	33450034
CK	34-1 ⚠, 34-2 ⚠	CONN CRIPLET 1,9mm	41930009
CK	35*	CMKT RAD 1µF 63V	33124758
CK	37*	C CER2 SMD 100nF 25V	32190001
CK	38*, 39*	C ECAP RAD 47µF 16V	34223251
CO	1 ⚠, 4 ⚠	C CER2/3 BLK 1nF 20% 400VAC	32610922

Item		Description	Order no.
CO	2 ⚠	CMKT BLK 220nF 400V	33360002
CO	3 ⚠, 7 ⚠	C MP/P BLK 470nF 275VAC	33260006
CO	5, 10, 14, 48	C CER1 SMD 1nF 50V	32125545
CO	6	C CER1 SMD 56pF 50V	32125526
CO	8	CMKP RAD 1nF 100V	33622914
CO	9	C CER2 SMD 3n3 50V	32536207
CO	11	C CER2 RAD 220pF 500V	32790062
CO	12, 50, 51, 52, 53, 55, 56, 60, 63, 65	C CER2 SMD 100nF 25V	32190001
CO	13	C ECAP RAD 47µF 63V	34540053
CO	15	C MKP BLK 4n7 1K6V	33450019
CO	15-1 ⚠, 15-2 ⚠	CONN CRIPLET 1,9mm	41930009
CO	19	C ECAP BLK 220µF 450V HV	34540102
CO	20	CMKT RAD 1µF 63V	33124758
CO	21	CMKP BLK 220pF 1K6V	33460009
CO	22	CMKT BLK 10nF 630V	33380023
CO	23 ⚠	C CER2/3 BLK 1n5 20% 400VAC	32960002
CO	24	C CER2/3 RAD 330pF 10% 500V	32780002
CO	25, 26, 27	C CER2/3 RAD 1nF 10% 500V	32780004
CO	29, 54	CMKT BLK 100nF 250V	33360003
CO	31	C ECAP BLK 2200µF 35V	34226678
CO	32	C ECAP BLK 1000µF 35V	34510010
CO	33, 34, 39, 40, 41, 42	CMKT RAD 100nF 63V	33127106
CO	36	C ECAP BLK 220µF 250V HV	34610007
CO	43, 44	C ECAP BLK 1000µF 16V	34510004
CO	45	C ECAP RAD 10µF 63V	34540025
CO	49	C CER2 SMD 10nF 50V	32536213
CO	58, 59, 62, 64	C ECAP RAD 100µF 16V	34223252
CQ	1*	C CER1 SMD 56pF 50V	32125526
CQ	2	C CER1 SMD 1nF 50V	32125545
CQ	3*	C CER1 SMD 100pF 50V	32125515
CQ	4	C ECAP RAD 10µF 63V	34540025
CQ	5, 6, 8, 9	C CER2 SMD 100nF 25V	32190001
CQ	7*, 11*, 12*	C CER1 SMD 27pF 50V	32125509
CQ	10	C ECAP RAD 100µF 16V	34223252
CQ	13*	C CER1 SMD 39pF 50V	32125512
CS	1	CMKT RAD 100nF 63V	33127106
CS	3	CMKT BLK 47nF 100V	33380019
CS	4	CMKP RAD 10nF 250V	33450057
CS	5	CMKT RAD 470nF 63V	33127123
CS	6	C CER2 SMD 100nF 25V	32190001
CS	7	C ECAP RAD 47µF 63V	34540053
CS	8, 10, 11, 12	C CER2 SMD 10nF 50V	32536213
TRANSISTORS			
TA	1*, 2*, 4*, 5	TR NPN SMD BC847B 45V	36145312
TA	3*	TR PNP SMD BC857B 45V	36145412
TK	1, 2, 4, 9, 15*, 16*, 17*	TR PNP SMD BC857B 45V	36145412
TK	3	TR NPN PWR BLK 2SD2012	36270004
TK	3, 12	HEATSINK SPRING	79400021
TK	6, 18*, 25	TR NPN SMD BC847B 45V	36145312
TK	8	TR NPN RAD BC637 60V 1A	36220003
TK	10	N-FET PWR BLK BUK457-400B	36370003
TK	11	TR NPN RAD BF422 250V	36125217
TK	12	TR NPN PWR BLK BU2525AF	36270003
TK	13*	TR PNP RAD BC327-25 45V	36147109
TK	14*	TR NPN RAD BC337-25 45V	36147138
TO	1	N-FET STP7NC70Z 800V 6,8A	36370018
TO	1-6 ⚠	CONN CRIPLET 1,3mm	41930008
TO	1-2 ⚠, 1-3 ⚠	CONN CRIPLET 1,9mm	41930009
TO	1	INSULATOR FOIL 3KV	49000087
TO	1	HEATSINK SPRING	79400021
TO	1	TR NPN SMD BC847B 45V	36145312
TS	5, 6, 7, 8, 9, 10	TR PNP SMD BC857B 45V	36145412
DIODES			
DA	1*	DI SMD BAS16 75V 250mA	36560318
DK	2, 3, 5	DI SMD BAS16 75V 250mA	36560318
DK	9, 12	DI RECT PWR AX BYV36C 600V	36575452
DK	11, 14, 19*, 20*	DI RECT PWR AX 1N4937 600V	36575353
DK	13	DI AX RECT BYT56J 600V	36240001B
DK	15	DI RECT PWR AX BYV26C 600V	36610005
DK	16	DI BK RECT BYM357X	36621564

Item		Description	Order no.
DK	16	HEATSINK SPRING	79400021
DK	16-1 ⚠, 16-2 ⚠, 16-3 ⚠	CONN CRIPLET 1,3mm	41930008
DO	1	DI AX RECT BYM36E 1K0V	36621562B
DO	1-1 ⚠, 1-2 ⚠	CONN CRIPLET 1,9mm	41930009
DO	2, 6	DI AX RECT BYM36E 1K0V	36621562
DO	2	2 x COOLING PLATE	81402597
DO	2-1 ⚠, 2-2 ⚠, 6-1 ⚠, 6-2 ⚠, 16-1 ⚠, 16-2 ⚠	CONN CRIPLET 1,9mm	41930009
DO	3, 4	DI RECT PWR AX BY527 1K25V	36610001
DO	3-1 ⚠, 3-2 ⚠, 4-1 ⚠, 4-2 ⚠	CONN CRIPLET 1,9mm	41930009
DO	6	DI AX RECT BYM36E 1K0V	36621562B
DO	7-1 ⚠, 7-2 ⚠	CONN CRIPLET 1,3mm	41930008
DO	9, 21	DI SMD BAS16 75V 250mA	36560318
DO	12	DI BK RECT FMC-G28SL 800V	36621567
DO	12, 13	HEATSINK SPRING	79400021
DO	13	DI BK RECT STTA506F 600V	36621563
DO	12-1 ⚠, 12-2 ⚠, 13-1 ⚠, 13-2 ⚠	CONN CRIPLET 1,3mm	41930008
DO	14	DI SMD BAS20 150V 200mA	36560320
DO	16	DI AX RECT BYM36E 1K0V 2,9A	36621562
DO	16	2 x COOLING PLATE	81402597
DO	19	IC VREF TL431CLP	37410012
DO	17, 18	DI RECT AX BYW98 200V 3A	36575470
DO	17, 18	2 x COOLING PLATE	81402596
DO	2, 6		
DO	22, 26	DI AX SCHT SB560 60V 5,0A	36420005
DO	22-1 ⚠, 22-2 ⚠, 26-1 ⚠, 26-2 ⚠	CONN CRIPLET 1,9mm	41930009
DS	1	DI SMD BAS16 75V 250mA	36560318

ZENERS

ZDA	2*	Z DI SMD BZX84A 12V 1%	36770019
ZDK	1*	Z DI AX BZX55B 18V 2%	36770008
ZDK	2	Z DI SMD BZX84B 24V 2%	36780022
ZDK	3, 10	Z DI SMD BZX84B 12V 2%	36780008
ZDK	4	Z DI SMD BZX84C 51V 5%	36770035
ZDK	5	Z DI SMD BZX84C 2V4 5%	36780005
ZDO	1, 11	Z DI SMD BZX84B 12V 2%	36780008
ZDQ	1, 1	Z DI SMD BZX84B 30V 2%	36770033

INTEGRATED CIRCUITS

ICA	1*, 2*	IC AUDIO TDA2616 12+12W	37631259
ICA	1, 2	HEATSINK SPRING	79400021
ICO	1	IC PWR CONT TDA16846	37450019
ICO	3 ⚠	IC OPTO COUPL SFH615A-2	36950009
ICO	5	IC V-REG L4941BV 5V 1,0A	37681840
ICO	6	IC V-REG PQ05RH11 5V 1,5A	37460008
ICO	8	IC V-REG PQ3RD13 3V3 1,0A	37460033
ICO	11	IC V-REG L7812CV 12V 1,5A	37681748
ICO	5, 6, 8, 11	HEATSINK SPRING	79400021
ICS	1	IC DEFL TDA8354Q/N1I/N1E S1	37450017
ICS	1	HEATSINK SPRING	79400021

FUSES

FO	1 ⚠	FUSE F2,5A MINIATURE	43770004
FO	1-1 ⚠, 1-2 ⚠	CONN CRIPLET 1,3mm	41930008
FO	2 ⚠, 4 ⚠, 7 ⚠, 8 ⚠	FUSE T2,0A MINIATURE	43770005

TRANSFORMERS

TRK	1	TRF FM2543	45380013
TRK	2 ⚠*	DST TRF ELDOR 1372,8001C	45360082
TRK	2 ⚠*	DST TRF ELDOR 1372,9018 M	45360083
TRK	2-5 ⚠, 2-7 ⚠, 2-9 ⚠	CONN CRIPLET 1,3mm	41930008
TRK	2-1 ⚠, 2-2 ⚠, 2-16 ⚠	CONN CRIPLET 1,9mm	41930009
TRK	3*	TRF AT4043/67A FOR DYN.FOC	45380018
TRK	3-1 ⚠, 3-3 ⚠, 3-4 ⚠, 3-6 ⚠	CONN CRIPLET 1,9mm	41930009
TRK	4*	TRF TM2624 HOR. SHIFT	45350002
TRK	4-2 ⚠, 4-5 ⚠, 4-9 ⚠	CONN CRIPLET 1,9mm	41930009
TRO	2 ⚠*	MAINS TRF 2322.0019B/TM2672	45320063
TRO	2 ⚠*	MAINS TRF 2322,0030 M	45320069
TRO	2-10 ⚠, 2-19 ⚠, 2-21 ⚠, 2-22 ⚠	CONN CRIPLET 1,9mm	41930009

COILS

L	1, 2, 3	EMI SUPPRES BEAD 3,5x9	45620007
L	1-1 ⚠, 1-2 ⚠, 2-1 ⚠, 2-2 ⚠, 3-1 ⚠, 3-2 ⚠	CONN CRIPLET 1,3mm	41930008
LK	1*	COIL LIN BLK 8...26µH FU1206D	45161280
LK	1*	COIL LIN BLK 8...26µH FU1206E	45161281
LK	1*	COIL LIN BLK TU1216	45161282A
LK	1-1 ⚠, 1-2 ⚠	CONN CRIPLET 1,9mm	41930009
LK	2	COIL BLK 280µH FJ1311	45610004
LK	2-1 ⚠, 2-2 ⚠	CONN CRIPLET 1,3mm	41930008
LK	3	COIL BLK 1,9mH	45610018
LK	4	EMI SUPPRES BEAD 3,5x9	45620007
LK	5, 6	COIL BLK 47µH 7% 2,0A	45620035
LK	5-1 ⚠, 5-2 ⚠, 6-1 ⚠, 6-2 ⚠	CONN CRIPLET 1,9mm	41930009
LO	1 ⚠	COIL MAINS BLK TJ1853	45390013
LO	1-1 ⚠, 1-2 ⚠, 1-3 ⚠, 1-4 ⚠	CONN CRIPLET 1,9mm	41930009
LO	3	EMI SUPPRES BEAD 3,5x9	45620007
LO	8	COIL BLK 1,5mH 1,7A 250V	45390020
LO	8-1 ⚠, 8-4 ⚠	CONN CRIPLET 1,9mm	41930009
LO	10	COIL AX 10µH 1200mA	45571698
LO	5, 6, 7	COIL BLK 10µH 1200mA RAD	45571699
LO	9-1 ⚠, 9-2 ⚠, 9-3 ⚠, 9-4 ⚠	CONN CRIPLET 1,9mm	41930009
LO	11-4 ⚠, 11-6 ⚠	CONN CRIPLET 1,9mm	41930009
LQ	1	COIL BLK 10µH 1200mA RAD	45571699
LQ	2*	COIL RAD 33µH 150mA	45630014
LQ	3, 4	COIL AX 10µH 1200mA	45571698
LQ	5*	COIL RAD 22µH 170mA	45630013
TRK	5 ⚠	COIL BLK RAD 68µH 15% E/W	45380024
TRK	5-1 ⚠, 5-3 ⚠, 5-4 ⚠, 5-6 ⚠	CONN CRIPLET 1,9mm	41930009

OTHERS

A	6, 7, 8, 9	GROUNDING SPRING	84880130
HCK	29-1 ⚠, 34-1 ⚠	CONN CRIPLET 1,9mm	41930009
HCO	15-1 ⚠	CONN CRIPLET 1,9mm	41930009
HXKT	1-1 ⚠, 2-1 ⚠, 3-1 ⚠, 4-1 ⚠, 7-1 ⚠	CONN CRIPLET 1,9mm	41930009
J	108*	JUMPER	12,5mm
J	113*	JUMPER	17,5mm
J	181*	JUMPER	20mm
J	194-1 ⚠, 194-2 ⚠	CONN CRIPLET 1,3mm	41930008
J	195-1 ⚠, 195-2 ⚠	CONN CRIPLET 1,3mm	41930008
J	198-1 ⚠, 198-2 ⚠	CONN CRIPLET 1,3mm	41930008
J	200-1 ⚠, 200-2 ⚠	CONN CRIPLET 1,3mm	41930008
J	202-1 ⚠, 202-2 ⚠	CONN CRIPLET 1,3mm	41930008
PK	1 ⚠*	R POT FOCUS 59M 2W0 GDE	31280010
PO	1	R TRIM HOR 2K2 0W1	31110970
TU	1*	TUNER TEMIC 4046 Multi	58231061
TU	1*	TUNER TEMIC 4006 B/G	58231063
TRK	3*	JUMPER J 300	15mm
XA	1*	ROW CONN 3-PIN SNAP-IN	73190603
XA	2	ROW CONN 4-PIN SNAP-IN	73190604
XAV	1	CONN ROW 9-PIN	41710068
XAV	2, 3	CONN ROW 19-PIN	41710073
XK	3	ROW CONN 5-PIN	41710001
XK	3-1 ⚠, 3-2 ⚠, 3-3 ⚠, 3-4 ⚠, 3-5 ⚠	CONN CRIPLET 1,9mm	41930009
XK	6	CONN HEADER 6-PIN	41710002
XK	7-1 ⚠, 7-2 ⚠	CONN CRIPLET 1,9mm	41930009
XKT	1	BLADE CONN 2,8mm	41930001
XO	1	ROW CONN 2-PIN	73184750
XO	1-1 ⚠, 1-2 ⚠	CONN CRIPLET 1,9mm	41930009
XO	2	STIFTW,KA, 5,08 SW	73190702

Item		Description	Order no.
XS	1	ROW CONN 3-PIN SNAP-IN	73190603
XT	1, 2	CONN ROW 7-PIN SNAP-IN	41710077
	ANODE CABLE:		
⚠	- FOR ELDOR DST 570mm+chimney (28")		96008868
⚠	- FOR ELDOR DREAM DST 630mm+chimney (29")		96008869
	ANODE CLIP 4mm ELDOR		54041417
	ANT CABLE ASS 200mm RCA/IEC plug with ferrite		47780009
⚠	ELDOR-DST CABLE 280mm (28")		96011091
⚠	FOCUS CABLE 410mm (29")		96010220
⚠	FOCUS CABLE 1,2 410mm (28")		96010142
⚠	FOCUS CABLE 1,2 410mm (29")		96010230
	FOCUS CLIP 3mm OREGA		54041366
	FOR CABLE HOLDING 11mm		65220402
	SCREEN CABLE 460mm		96010240
*	HH-DY WIRE		96010243
	PK/Z WIRE		96010059
	SDY WIRE 550mm		96008120
	SVM CABLE		96010243
	WIREBLUG 2-PIN FC>POW		96010080

AV***** (AV100) Signal module

RESISTORS

JAV	2, 4, 9, 11, 14, 15, 16, 23, 24, 26, 27, 28, 32, 35, 36, 38, 39, 41, 42, 44, 45, 47, 48	R SMD 0R 0W10	31425802
RAV	1, 2, 3, 6, 9, 11, 12, 13, 16, 17, 29, 31, 202, 203, 204, 206, 207, 208, 209, 211, 212, 213, 214, 296, 297, 298, 303, 311, 318	R SMD 75R 0W10	31425861
RAV	4, 14, 32	R SMD 15K 0W10	31425835
RAV	7, 18, 21, 44, 63, 99, 108, 114, 117, 119, 122, 126, 128, 132, 134, 138, 141, 164, 166, 223, 224, 226, 246, 337	R SMD 470R 0W10	31425817
RAV	8, 51, 61, 69, 93, 94, 158, 228, 247, 256, 257, 258, 279, 291, 292	R SMD 1K0 0W10	31425820
RAV	19, 22, 269, 342	R SMD 330R 0W10	31425857
RAV	23, 24, 26, 34, 42, 43, 82, 101, 102, 109, 111, 280, 306, 313, 321, 333	R SMD 220R 0W10	31425815
RAV	27, 33, 41, 46, 49, 57, 58, 64, 66, 67, 68, 76, 87, 89, 156, 161, 191, 193, 218, 248, 273, 276, 281, 286, 287, 288, 353	R SMD 10K 0W10	31425833
RAV	28 ⚠	R FUS RAD 4R7 5% 0W25	31860002
RAV	36, 60, 98, 107, 113, 116, 118, 121, 124, 127, 131, 133, 137, 139, 162, 163, 169, 171, 172, 173, 274	R SMD 100K 0W10	31425844
RAV	37, 56, 284, 289	R SMD 22K 0W10	31425837
RAV	38, 356	R SMD 27K 0W10	31425839
RAV	39, 88, 231, 282, 304, 312, 319, 327, 334, 336	R SMD 2K2 0W10	31425828
RAV	47 ⚠	R FUS RD 47R 0W25	31860006
RAV	48, 84, 86, 159, 260	R SMD 47K 0W10	31425836
RAV	52, 53, 92, 96, 97, 232, 283, 285, 216, 217, 277, 278, 348, 349	R SMD 270R 0W10	31425855
RAV	54, 91, 299, 307, 314, 322, 341	R SMD 390R 0W10	31425816
RAV	55, 264, 266, 267, 268	R SMD 0R 0W10	31425802
RAV	59, 71, 72, 77, 83, 244	R SMD 4K7 0W10	31425824
RAV	62	R SMD 150R 0W10	31425812
RAV	73, 74, 78, 81, 106, 123, 129, 136, 142, 144, 183, 184, 186, 187, 188, 189, 222, 227, 235, 259, 261, 293, 294, 300, 301, 308, 316, 323, 331, 332	R SMD 100R 0W10	31425852
RAV	103, 104, 112, 143	R SMD 220K 0W10	31425847
RAV	146, 147, 148, 149, 151, 152, 153, 154	R SMD 1M0 0W10	31425801
RAV	156	R SMD 10R 0W10	31425810
RAV	167, 168, 196, 201, 344, 346	R SMD 33K 0W10	31425840
RAV	192, 198	R SMD 47R 0W10	31425809
RAV	194, 197, 351	R SMD 68K 0W10	31425838
RAV	199	R CARF RAD 180R 5% 0W25	31630026
RAV	229, 249, 251, 252	R SMD 560R 0W10	31425818
RAV	237, 238	R CARF AX 270R 0W25	31548624
RAV	239, 241, 242, 290	R SMD 3K9 0W10	31425830
RAV	243, 253, 254	R SMD 1K5 0W10	31425826
RAV	265, 302, 309, 317, 324	R SMD 22R 0W10	31425849
RAV	295	R SMD 1K8 0W10	31425827
RAV	326	R SMD 33R 0W10	31425808
RAV	338	R SMD 910R 0W10	31425883
RAV	339	R SMD 430R 0W10	31425879
RAV	343	R SMD 300R 0W10	31425856
RAV	347, 354	R SMD 18K 0W10	31425813
RAV	352	R SMD 6K81 0W10	31490455
RAV	355	R NTC SMD 33K	31910002

CAPACITORS

CAV	1, 2, 3, 4, 6, 7, 9, 11, 21, 22, 67, 69, 72, 77, 82, 87, 109, 111, 164, 173, 179	C CER1 SMD 390pF 50V	32145428
CAV	8, 23, 26, 28, 41, 260, 265	C ECAP RAD 2µ2 63V	34540023
CAV	12, 102, 106, 107, 142, 167, 187, 216, 219, 233, 240, 250, 255, 263, 268, 279, 280, 289	C ECAP RAD 10µF 63V	34540025
CAV	13	C CER1 SMD 220pF 50V	32125513
CAV	14, 215	C CER1 SMD 10pF 50V	32125506
CAV	16	C (M)KT RAD 1µF 63V	33124758
CAV	17, 24, 56, 64, 118, 121, 131, 132, 238, 239, 241, 246, 247, 248, 249, 251, 252, 253, 254, 256, 257, 258, 259, 273, 274, 276, 285, 287, 288	C CER2 SMD 10nF 50V	32536213
CAV	18	C ECAP RAD 470µF 16V	34220551
CAV	19, 29, 20, 32, 33, 34, 37, 38, 39, 44, 47, 49, 51, 61, 101, 103, 112, 139, 143, 166, 188, 212, 213, 214, 217, 218, 221, 223, 228, 229, 232, 236, 237, 242, 261, 270, 271, 272, 278, 282, 283, 284, 286, 294	C CER2 SMD 100nF 25V	32190001

Item	Description	Order no.
CAV 27, 146, 148, 151, 153, 156, 158, 162, 171, 182	C CER2 SMD 220nF 16V	32525900
CAV 31	C CER1 SMD 22pF 50V	32180027
CAV 36, 168, 178	C ECAP RAD 47µF 50V	34540028
CAV 42, 43, 202, 203, 226, 227	C CER1 SMD 33pF 50V	32125507
CAV 46, 48, 52, 117, 119, 222	C ECAP RAD 100µF 25V	34540020
CAV 53, 62, 73, 78, 83, 88, 234	C ECAP RAD 22µF 35V	34540021
CAV 54, 63, 74, 79, 84, 89, 90, 91, 92, 93, 113, 116, 122, 123, 124, 176, 269	C CER1 SMD 1nF 50V	32125545
CAV 57, 58, 59, 66, 68, 71, 76, 81, 86, 94, 126, 127, 128, 129	C CER2 SMD 330nF 16V	32525901
CAV 96, 97	C CER1 SMD 1p2 50V	32180008
CAV 98, 99, 105, 108, 206, 293	C CER1 SMD 47pF 50V	32125508
CAV 104	C ECAP RAD 3µ3 63V	34540029
CAV 137, 138, 245	C ECAP RAD 1µF 100V HV	34229675
CAV 141, 231	C ECAP RAD 47µF 16V	34223251
CAV 144, 147, 149, 152, 154, 157, 159	C CER1 SMD 330pF 50V	32125517
CAV 161, 169, 177, 191, 193	C CER2 SMD 47nF 50V	32536222
CAV 163, 172, 181, 189, 194	C CER1 SMD 1n5 50V	32190025
CAV 183, 201	C CER2 SMD 680nF 10V	32525905
CAV 184, 186	C CER1 SMD 6p8 50V	32190009
CAV 192, 196, 197	C CER2 SMD 68nF 50V	32790052
CAV 199, 291	C CER1 SMD 82pF 50V	32125531
CAV 224	C (M)KT RAD 470nF 63V	33127123
CAV 243, 244	C CER1 SMD 39pF 50V	32125512
CAV 262, 267, 281	C CER1 SMD 2n2 50V	32190026
CAV 264, 266	C CER1 SMD 27pF 50V	32125509
CAV 275	C CER1 SMD 100pF 50V	32125515
CAV 277	C ECAP RAD 4µ7 63V	34540024
CAV 297	C CER2 SMD 470nF 16V	32525903
TRANSISTORS		
TAV 1	TR NPN RAD BC547B 45V	36220002
TAV 2, 3, 7, 8, 9, 11, 12, 13, 16, 17, 18, 19, 20, 22, 23, 26, 27, 29, 31, 33, 34, 37, 38, 39, 41, 42, 43, 44	TR NPN SMD BC847B 45V	36145312
TAV 4, 24, 25, 28, 32, 35, 36	TR PNP SMD BC857B 45V	36145412
TAV 14	TR PNP RAD BC557B 45V	36146424
DIODES		
DAV 1	DI SMD BAV70 70V 215mA	36561954
DAV 2, 3, 7, 8	DI SMD LS4148 75V 200mA	36490002
DAV 9, 11, 12, 13	DI SMD BAS16 75V 250mA	36560318
ZENERS		
ZDAV 1, 2, 4	Z DI SMD BZX84C 8V2 5%	36780003
ZDAV 3	Z DI AX BZX83C 10V 5%	36770002
ZDAV 5	Z DI SMD BZX84B 5V6 2%	36780021
ZDAV 6	Z DI SMD BZX84C 3V3 5%	36770018
INTEGRATED CIRCUITS		
ICAV 1	IC VIDEO TEA6417	37440012
ICAV 2	**CURRENT SOFTWARE VERSION 11.05.2001**	**TZAE14,0**
ICAV 2	IC SOCKET	41520751
ICAV 3	IC-TL7705ACDR	37460011
ICAV 4	IC LOGIC SMD 74HCT0814	37810023
ICAV 5	IC UC SMD SDA30C264M2	37857014
ICAV 6, 10	IC OPAMP SMD MC33078D8	37470007
ICAV 7	IC AUDIO MSP3411G-PP-B8	37430035
ICAV 7	IC AUDIO MSP3410G-PP-B6	37430037
ICAV 8	IC LOGIC SMD 4052BT	37810014
ICAV 11	IC VIDEO SMD VPC3230D-QA-B3	37850222
ICAV 12	IC VIDEO SMD SDA9400	37850224
ICAV 13	IC VIDEO SMD SDA5275-3P	37857044
ICAV 15	IC DRAM SMD 4Mx4	37688004
ICAV 16	IC VIDEO SMD SDA9489X	37850225
ICAV 17	IC EEPROM SMD 128x8	37866003
ICAV 18	IC VIDEO SMD DDP3310B-PT-F6	37850234
ICAV 19	IC EEPROM SMD 4Kx8	37866011
COILS		
LAV 1, 2, 3, 4	COIL SMD 2,2µH 30mA	45640023
LAV 8	COIL RAD 10µH 600mA	45571680
LAV 9, 10, 11, 12, 13, 14, 16	COIL SMD 3,3µH 30mA	45640024
LAV 17, 18, 19, 26, 27, 28, 29, 30, 31, 32	COIL BLK 10µH 1200mA RAD	45571699
LAV 23	COIL SMD 6,8µH 15mA	45640025
LAV 21, 22, 24, 33	COIL SMD 10µH 15mA	45640026
LFAV 1	EMIFIL RAD 4n7 1,0A	45558419
CRYSTALS		
ZAV 1	CRYSTAL RAD 12,00 MHz	45730005
ZAV 2	CRYSTAL BLK 18,432 MHz	45710011
ZAV 4	CRYSTAL BLK 20,250 MHz	45730011
ZAV 6	CRYSTAL BLK 20,48 MHz	45730004
ZAV 7	CRYSTAL RAD 20,250 MHz	45710006
ZAV 8	CRYSTAL BLK 5,000 MHz	45730012
OTHERS		
XAF 1	CONN HEADER 20-PIN	41710071
XAH 1	CONN HEADER 10-PIN	41710070
XAV 1	MODULE CONN 9-PIN	41720002
XAV 2, 3	CONN MODULE 19-PIN	41720048
XAV 4	SCART CONN BLACK	41450292
XAV 5	SCART CONN BLUE	41910004
XAV 6	SCART CONN ORANGE	41910005
XAV 7	CONN RCA VERT WH+RE	41910013
XAV 8	CONN D-TYPE 15-PIN	41720017
XAV 9	CONN MODULAR 6-PIN	41910002
JAV 6, 7, 8	JUMPER 20mm	85600102
JAV 13, 29, 40	JUMPER 12,5mm	85600078
JAV 46	JUMPER 17,5mm	85600092
W 1, 2	JUMPER 75mm	85500855
	A/V MODULE BRACKET	84481920
	SIGNAL BOX BOTTOM	84860590
	SIGNAL BOX LID	84860600
	LOCKING SCREWS	41720017

FC100 Control unit module

Item	Description	Order no.
RESISTORS		
J 2, 5, 48, 49, 31, 33, 38	R SMD 0R 0W10	31425802
JFC 10	R SMD 0R 0W25	31425601
JFC 14	R SMD 0R 0W10	31425802
JFC 15, 16, 17	R SMD 0R 0W10	31425802
RFC 1, 2, 10, 31	R SMD 47K 0W10	31425836
RFC 3, 4	R SMD 75R 0W10	31425861
RFC 5	R SMD 470R 0W10	31425817
RFC 6, 11, 16	R SMD 15K 0W10	31425835
RFC 9, 12	R SMD 1K0 0W10	31425820
RFC 13	R SMD 330R 0W25	31425614
RFC 14, 17	R SMD 100K 0W10	31425844
RFC 15, 19, 20	R SMD 10K 0W10	31425833
RFC 21, 22	R CARF AX 2K2 5% 0W25	31660037
RFC 26, 27	R CARF AX 100R 0W25	31660049
RFC 37	R SMD 10K 0W25	31425635
RFC 41	R SMD 390R 0W10	31425816
RFC 43, 44, 45, 48, 49	R SMD 1M0 0W10	31425801
RFC 47	R SMD 270R 0W10	31425855
RCF 52	R CARF BLK 4K7 0W50 AX	31650462
CAPACITORS		
CFC 1 ⚠, 2 ⚠	C MP/P BLK 100nF 275VAC	33260003
CFC 3	C ECAP RAD 470µF 10V	34221242
CFC 4	C ECAP RAD 100µF 10V	34222576
CFC 5, 7	C CER2 SMD 4n7 50V	32536210
CFC 8, 20	C ECAP RAD 10µF 35V	34540027
CFC 10, 13	C CER1 SMD 390pF 50V	32145428
CFC 11, 16, 17, 18, 19, 32	C CER2 SMD 10nF 50V	32536213
CFC 14, 15	C ECAP RAD 100µF 25V	34540020
CFC 21, 22	C CER1 RAD 15pF 100V	32180003
CFC 27	C ECAP RAD 2µ2 400V	34540097
CFC 35	C CER2 SMD 100nF 25V	32190001
CFC 36	C CER2 RAD 47pF 1K0V	32790054
TRANSISTORS		
TFC 1, 2, 4	TR PNP SMD BC857B 45V	36145412
TFC 3, 5	TR NPN SMD BC847B 45V	36145312
DIODES		
DFC 1	DI RECT PWR AX BYV36C	36575452
DFC 4	LED RAD RED 5mm	36910004
DFC 9	JUMPER 12,5mm	85600078
DFC 10	DI RECT PWR AX BY527	36610001
DFC 11-1	CONN CRIPLET 1,9mm	41930009
DFC 11	DI TRC BLK BT137 600V 8A	36104002
DFC 17	LED RAD GREEN 5mm	36910005
ZENERS		
DZFC 1	Z DI AX BZX55B 4V3 2%	36770031
INTEGRATED CIRCUITS		
ICFC 1	IC PWR CONT TNY253P	37410032
ICFC 2 ⚠	IC OPTO TRIAC TLP763JF	36950010
ICFC 3 ⚠	IC OPTO COUPL SFH615A-2	36950009
FUSES		
FFC 1 ⚠	FUSE PRIMARY T3,15A HB	43751652
FFC 1, 1	FUSEHOLDER CLIPS	41540001
TRANSFORMERS		
MFC 2 ⚠	MAINS TRF 2262.0029B/TM2673	45310006
COILS		
LCF 1, 2	COIL AX 40µH 2000mA	45620057
LFC 10	EMI SUPPRES BEAD 3,5X9	45620007
LFC 5, 6	COIL SMD 2,2µH 30mA	45640023
LFC 3, 4, 7, 8, 9	COIL SMD 10µH 15mA	45640026
MFC 1 ⚠	COIL MAINS BLK TJ1853	45390013
OTHERS		
HFC 1	IR-RECEIVER TSOP1738 3-PIN	58880977
SWFC 1, 2, 3, 4	TACTILE SWITCH 4 IN ROW	41150685
UFC 1 ⚠	MAINS SWITCH 250V 4/80A	41210004
XA 5	SIGN.CABLE 20-PIN, 600mm	96010197
XFC 1	ROW CONN 2-PIN	73184750
XFC 6-3	CONN RCA 3 IN ROW	41430747
XFC 9-4	CONN S-VHS	41452244
XFC 10	CONN PHONO 3,5mm JACK	41910001
XO 2	ROW CONN 2-PIN	73184750
	HEATSINK FOR TRIAC	84830520
	CONN CRIPLET 1,9mm	41930009
⚠	COVER FOR CAM. CONN.	84488890
	MODULE SUPPORT	81408167

HH131 CRT module*

Item	Description	Order no.
RESISTORS		
J 19	R CARF AX 270R 5% 0W25	31660011
J 22	R SMD 0R 0W10	31425802
RH 1	R SMD 3K0 0W10	31490062
RH 2	R SMD 1K00 0W10	31490056
RH 3, 12, 16, 60	R SMD 0R 0W10	31425802
RH 4, 13, 17	R METF AX 68K 2% 1W0/73	31440008
RH 6, 7, 8, 9, 11, 14	R SMD 1K5 0W10	31425826
RH 18, 19, 21, 22, 23, 24	R COMP AX 470R 0W25	31595565
RH 26	R CARF RAD 33K 5% 0W25	31630036
RH 27	R CARF AX 4M7 5% 0W25	31660029
RH 28, 33	R COMP AX 1K5 0W50	31594639
RH 31	R SMD 68R 0W10	31425876
RH 36	R SMD 100K 0W10	31425844
RH 37, 52	R SMD 2K2 0W10	31425828
RH 38	R SMD 470R 0W10	31425817
RH 39, 59	R SMD 1K0 0W10	31425820
RH 40	R SMD 100R 0W10	31425852
RH 41, 53	R SMD 6K8 0W10	31425831
RH 42, 54	R CARF RAD 390R 5% 0W25	31630041
RH 43, 56	R CARF RAD 3R3 5% 0W25	31514515
RH 44 ⚠	R FUS RD 330R 0W25	31860005
RH 46, 48	R FUS RAD 4R7 5% 0W25	31860002
RH 47, 49	R SMD 18K 0W10	31425813
RH 50	R SMD 560R 0W10	31425818
RH 51	R CARF RAD 220R 0W25	31630051
RH 58	R SMD 330R 0W10	31425857
CAPACITORS		
CH 1	C ECAP RAD 47µF 16V	34223251
CH 2, 3, 7, 8, 12, 13, 36, 38	C CER2 SMD 22nF 50V	32536221
CH 4, 9, 14, 19	C (M)KT RAD 22nF 250V	33380002
CH 5	C CER1 SMD 68pF 50V	32125516
CH 6, 11, 16	C CER2 SMD 1nF 50V	32536203
CH 17	C ECAP BLK 4µ7 250V HV	34610001
CH 18	C ECAP BLK 10µF 250V HV	34610002
CH 22	C (M)KT BLK 8n2 1K5V	33360007
CH 27, 29, 43	C ECAP RAD 10µF 63V	34540025
CH 28	C ECAP RAD 100µF 25V	34540020
CH 31	C ECAP RAD 47µF 63V	34540053
CH 32, 33, 34, 37, 39	C CER2 SMD 100nF 50V	32536223
CH 41	C CER1 SMD 680pF 50V	32190014
CH 42	C CER1 SMD 56pF 50V	32125526
CH 44	C CER2 SMD 10nF 50V	32536213
CH 46	C CER2 SMD 4n7 50V	32536210
TRANSISTORS		
TH 1	TR NPN RAD BF422 250V	36125217
TH 2	TR PNP SMD BC857B 45V	36145412
TH 3	TR NPN SMD BF840 40V 25mA	36120750
TH 4	TR PNP BLK 2SA1837 230V 1A	36270021
TH 6	TR PNP SMD BF824 30V 25mA	36120751
TH 7	TR NPN BLK 2SC4793 230V 1A	36270020
DIODES		
DH 1, 2	DI RECT PWR AX BYV36C 600V	36575452
DH 3, 4, 5	DI SMD BAS16 75V 250mA	36560318
DH 6, 7, 8	DI SMD BAV103 200V 250mA	36561950

Item	Description	Order no.
INTEGRATED CIRCUITS		
ICH 1, 2, 3	IC VIDEO TDA6111Q-N4C	37440004
COILS		
LH 1	COIL AX 10µH 10% 230mA	45620003
LH 6, 7	COIL AX 10µH 1200mA	45571698
OTHERS		
CRT 1, 2	BLADE CONN 2,8mm	41930001
S 1	SPARK GAP 2,0KV +/-500V	41555001
SOH 2 ⚠	METALLO 0330 7700 44	41510006
UG 2	BLADE CONN 2,8mm	41930001
XH 1	WIRE BUNDLE 6-PIN 370mm	96010019
XH 2	RGB CABLE 10-PIN	96010198
XH 3	CONN ROW 3-PIN	41710083
	INS SLEEVE 2,5mm	47310003

HH135 CRT module*

RESISTORS		
J 19	R CARF AX 270R 5% 0W25	31660011
J 22	R SMD 0R 0W10	31425802
RH 1	R SMD 3K0 0W10	31490062
RH 2	R SMD 1K00 0W10	31490056
RH 3, 12, 16, 60	R SMD 0R 0W10	31425802
RH 4, 13, 17	R METF AX 68K 2% 1W0/73	31440008
RH 6, 7, 8, 9, 11, 14	R SMD 1K5 0W10	31425826
RH 18, 19, 21, 22, 23, 24	R COMP AX 470R 0W25	31595565
RH 26	R CARF RAD 33K 5% 0W25	31630036
RH 27	R CARF AX 4M7 5% 0W25	31660029
RH 28, 33	R COMP AX 1K5 0W50	31594639
RH 31	R SMD 68R 0W10	31425876
RH 36	R SMD 100K 0W10	31425844
RH 37	R SMD 2K2 0W10	31425828
RH 38	R SMD 470R 0W10	31425817
RH 39, 59	R SMD 1K0 0W10	31425820
RH 40	R SMD 100R 0W10	31425852
CAPACITORS		
CH 1	C ECAP RAD 47µF 16V	34223251
CH 2, 3, 7, 8, 12, 13	C CER2 SMD 22nF 50V	32536221
CH 4, 9, 14, 19	C (M)KT RAD 22nF 250V	33380002
CH 5	C CER1 SMD 68pF 50V	32125516
CH 6, 11, 16	C CER2 SMD 1nF 50V	32536203
CH 17	C ECAP BLK 4µ7 250V HV	34610001
CH 18	C ECAP BLK 10µF 250V HV	34610002
CH 22	C (M)KT BLK 8n2 1K5V	33360007
CH 27, 43	C ECAP RAD 10µF 63V	34540025
CH 28	C ECAP RAD 100µF 25V	34540020
CH 46	C CER2 SMD 4n7 50V	32536210
DIODES		
DH 1, 2	DI RECT PWR AX BYV36C 600V	36575452
DH 3, 4, 5	DI SMD BAS16 75V 250mA	36560318
DH 6, 7, 8	DI SMD BAV103 200V 250mA	36561950
TRANSISTORS		
TH 1	TR NPN RAD BF422 250V	36125217
TH 2	TR PNP SMD BC857B 45V	36145412
INTEGRATED CIRCUITS		
ICH 1, 2, 3	IC VIDEO TDA6111Q-N4C	37440004

Item	Description	Order no.
COILS		
LH 1	COIL AX 10µH 10% 230mA	45620003
LH 6	COIL AX 10µH 1200mA	45571698
OTHERS		
CRT 1, 2	BLADE CONN 2,8mm	41930001
S 1	SPARK GAP 2,0KV +/-500V	41555001
SOH 1 ⚠	METALLO 0330 5500 34	41554034
UG 2	BLADE CONN 2,8mm	41930001
XH 1	WIRE BUNDLE 6-PIN 370mm	96010019
XH 2	RGB CABLE 10-PIN	96010198
	INS SLEEVE 2,5mm	47310003

PP100 Twin tuner pip module

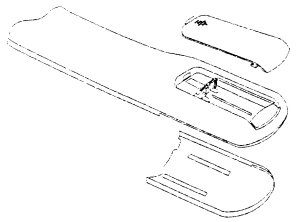
RESISTORS		
J 6, 7, 10, 13	R SMD 0R 0W10	31425802
RPP 3, 8, 24, 26, 41, 42, 43, 44, 47	R SMD 10K 0W10	31425833
RPP 5, 6	R SMD 270R 0W10	31425855
RPP 7, 22, 25, 30, 31, 32, 45, 48	R SMD 100K 0W10	31425844
RPP 10	R SMD 330R 0W10	31425857
RPP 11	R SMD 150R 0W10	31425812
RPP 12, 13	R SMD 22K 0W10	31425837
RPP 14, 16, 27, 28, 29, 50	R SMD 470R 0W10	31425817
RPP 15	R SMD 12K 0W10	31425834
RPP 17	R SMD 1K0 0W10	31425820
RPP 18, 20	R SMD 33K 0W10	31425840
RPP 19, 40, 46	R SMD 100R 0W10	31425852
RPP 21, 23	R SMD 180K 0W10	31490012
RPP 33	R SMD 680K 0W10	31490059
RPP 34, 38	R SMD 120K 0W10	31425845
RPP 35	R SMD 27K 0W10	31425839
RPP 36, 37	R SMD 1M0 0W10	31425801
RPP 39	R SMD 5K6 0W10	31425825
RPP 49	R SMD 8K2 0W10	31425832
CAPACITORS		
CPP 1, 2, 12, 16, 22, 34, 35, 36	C CER2 SMD 100nF 25V	32190001
CPP 3, 4, 20	C CER1 SMD 18pF 50V	32125520
CPP 5, 8, 23, 24, 25, 26, 27, 28	C ECAP RAD 22µF 35V	34540021
CPP 6	C CER2 SMD 22nF 25V	32525705
CPP 7	C ECAP RAD 4µ7 63V	34540024
CPP 9	C ECAP RAD 2µ2 63V	34540023
CPP 10, 14	C ECAP RAD 1µF 63V	34540022
CPP 11, 18, 31	C CER2 SMD 10nF 50V	32536213
CPP 13	C CER2 SMD 4n7 50V	32536210
CPP 15, 17	C CER2 SMD 1µF 10V	32525907
CPP 19	C ECAP RAD 100µF 16V	34223252
CPP 21	C ECAP RAD 47µF 16V	34223251
CPP 32, 33	C CER1 SMD 2n2 50V	32190026
TRANSISTORS		
TPP 1	TR NPN SMD BC847B 45V	36145312
TPP 2, 3, 4, 5	N-FET SMD 2N7002 60V	36380002
TTP 6	TR NPN SMD BC847B 45V	36145312
DIODES		
DPP 1, 2	DI SMD LL4148 75V 200mA	36560311

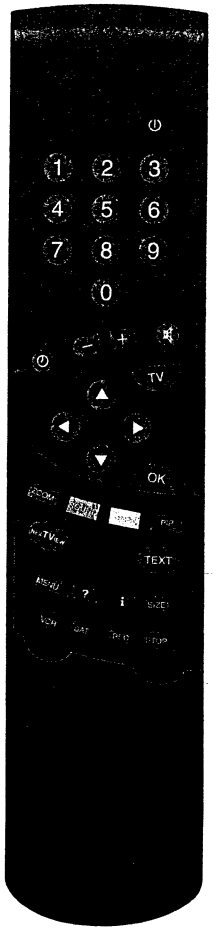
Item	Description	Order no.
INTEGRATED CIRCUITS		
ICPP 1	IC V-REG L78M08CV 8V 0,5A	37460003
ICPP 2	IC VIDEO SMD TDA6930X28	37450009
ICPP 3, 4	IC OPAMP SMD TL082CD8	37470003
COILS		
LPP 3	COIL ADJ 150nH	45530020
LPP 1, 2	COIL BLK 10µH 1200mA RAD	45571699
LPP 4, 5, 6	COIL SMD 10µH 15mA	45640026
FILTERS		
ZPP 1	SAW FILTER OFW G3962M BG	45740003
ZPP 2	FIL CER BLK TPS 5,5 MB	45558410
OTHERS		
TU 1	TUNER TEMIC 4702PH5	58231040
X 3	RCA CONN RED+WH+BLACK	41910019
X 1, 2	CONN MODULE 7-PIN	41720049
	ANT CABLE 80mm IEC-MALE/FEMALE	47780006

TA100 Audio line output module

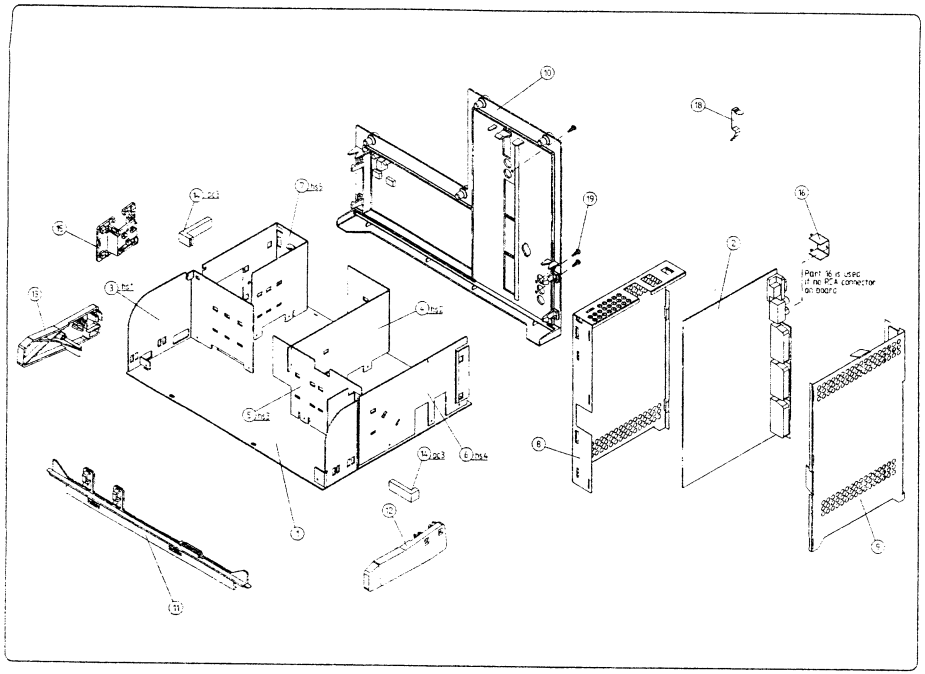
RESISTORS		
J 1, 4	R SMD 0R 0W10	31425802
RTA 1, 2, 25, 27, 30, 32, 35	R SMD 10K 0W10	31425833
RTA 3, 4, 11, 12, 17, 34, 36	R SMD 100K 0W10	31425844
RTA 5, 6	R SMD 180K 0W10	31490012
RTA 7, 8	R SMD 33K 0W10	31425840
RTA 9, 10, 16, 31	R SMD 470R 0W10	31425817
RTA 18, 19	R SMD 1M0 0W10	31425801
RTA 20	R SMD 680K 0W10	31490059
RTA 21, 22	R SMD 120K 0W10	31425845
RTA 23	R SMD 27K 0W10	31425839
RTA 24, 26, 33	R SMD 100R 0W10	31425852
RTA 28	R SMD 5K6 0W10	31425825
RTA 29	R SMD 12K 0W10	31425834
CAPACITORS		
CTA 1, 2, 3, 19, 21, 22	C ECAP RAD 22µF 16V	34223250
CTA 7, 8	C CER1 SMD 2n2 50V	32190026
CTA 9, 12, 15, 17	C CER2 SMD 100nF 25V	32190001
CTA 13	C CER2 SMD 10nF 50V	32536213
CTA 16	C ECAP RAD 47µF 16V	34223251
CTA 20	C ECAP RAD 100µF 16V	34223252
TRANSISTORS		
TTA 1, 2, 3, 4	N-FET SMD 2N7002 60V	36380002
TTA 5	TR NPN SMD BC847B 45V	36145312
INTEGRATED CIRCUITS		
ICTA 1, 2	IC OPAMP SMD TL082CD8	37470003
COILS		
LTA 1, 2, 3	COIL SMD 10µH 15mA	45640026
OTHERS		
J 3	JUMPER 20mm	85600102
XA 2	CONN MODULE 7-PIN	41720049
XT 5	RCA CONN RED+WH+BLACK	41910019

Item	Order no.
RC*702 Remote Control	
REMOTE CONTROL FINLUX MDB	RCF702
REMOTE CONTROL LUXOR MDB	RCL702
REMOTE CONTROL SALORA MDB	RCS702
BATTERY COVER FOR RC*702 MDB	80418127
SLIDE COVER FOR RCF702	84432820
SLIDE COVER FOR RCL702	84432840
SLIDE COVER FOR RCS702	84432830





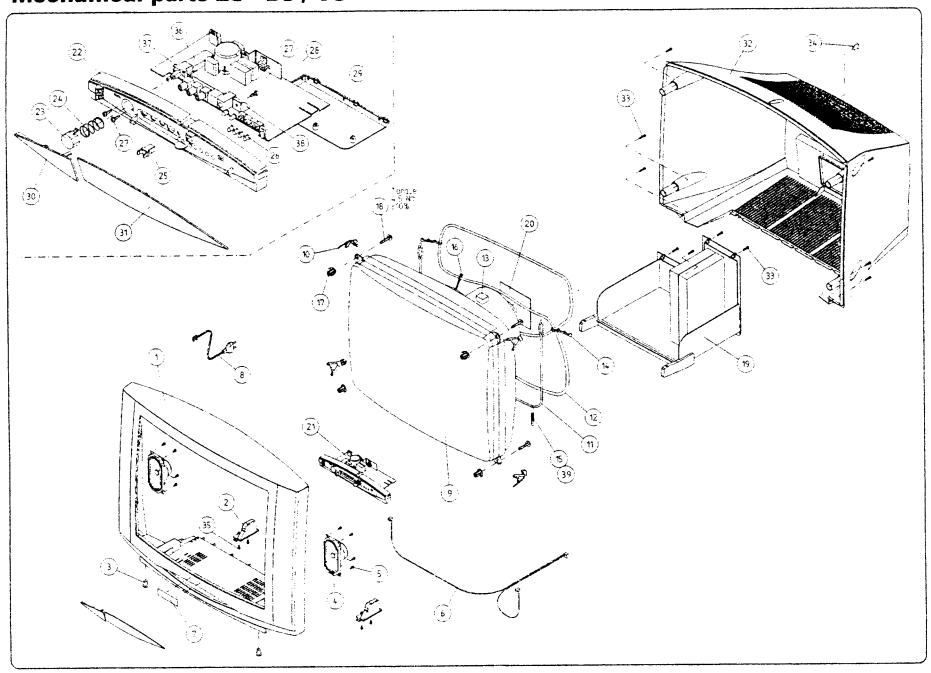
Mechanical parts, chassis



Item	Description	Order no.
	MODULES	
1	MAIN BOARD	TX*****
	(see section "Variable components", page 43)	
2	SIGNAL MODULE (AV100)	AV*****
	(see section variable components, page 45)	
	METAL PARTS	
3	HEAT SINK 1	84830830
4	HEAT SINK 2	84830910
5	HEAT SINK 3	84830920
6	HEAT SINK 4	84830860
7	HEAT SINK 5	84830900
8	SIGNAL BOX BOTTOM	84860590
9	SIGNAL BOX LID	84860600
16	AV MODULE BRACKET	84481920
	PLASTIC PARTS	
10	COVER PLATE FOR CONNECTOR AREA	
	A (3 x SCART, VGA + AUDIO IN)	84488800
	- Finlux 74X110 MC 100 Hz	
	B (3 x SCART, NO VGA + AUDIO IN)	84401100
	C (2 x SCART, NO VGA - AUDIO IN)	84405110
	- Finlux 71V100 MC 100 Hz	
	- Finlux 71V102 MC 100 Hz	
	- Finlux 74X100 MC 100 Hz	
	- Luxor 70FS10Si	
	- Salora 28MC110 100 Hz Champion II	
	- Salora 29MC100 100 Hz Gala	

Item	Description	Order no.
11	WIRE HOLDER	84486070
12	CHASSIS HOLDER LEFT	80409535
13	CHASSIS HOLDER RIGHT	80409559
14	CONNECTING PIECE 1-3 (ONLY NO. 3 USED)	84488881
15	CONNECTING PLATE 28"	84488470
	SPRINGS, SCREWS	
18	HEAT SINK SPRING	79400021
19	PT-SCREW 2.9x9.5 (2 AUDIO OUT, 1 AUDIO IN)	78360002

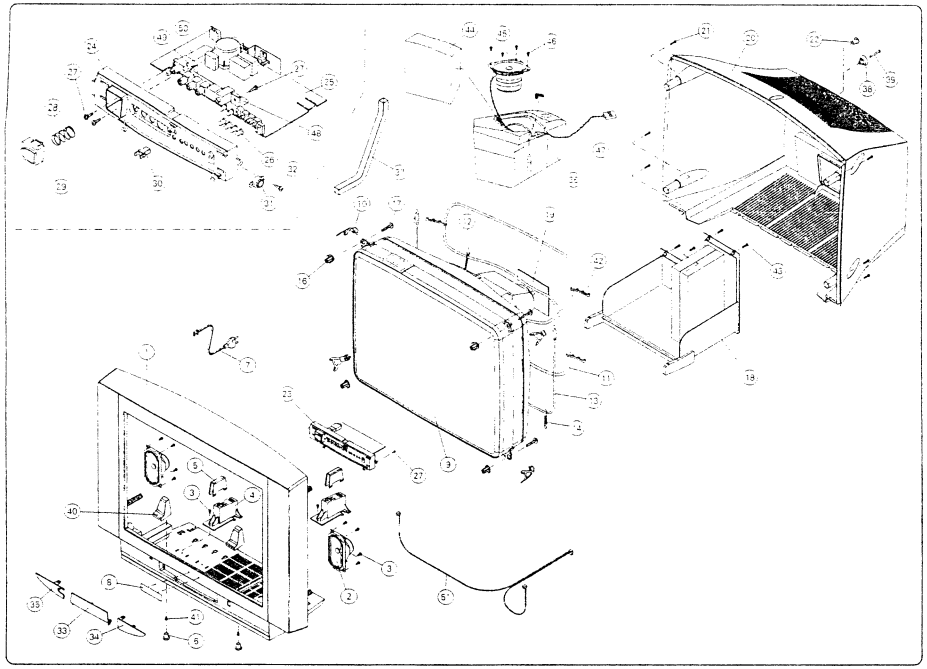
Mechanical parts 28" B8 / V3



Item	Description	Order no.
1 ⚠	CABINET 28 B8 SILVER	85101130
1 ⚠	CABINET 28 V3 MDB	85101120
1 ⚠	CABINET 28 V3 SILVER	85101090
2	CHASSIS BRACKET	84488920
3	FOOT PAD 14.6mm	80424027
4	LOUDSPEAKER 57x126mm 8Ω 10W	43120022
5	PT-SCREW KB40x10 FOR LOUDSPEAKER B8	WC0368
5	PT-SCREW KB40x10 FOR LOUDSPEAKER V3	WC0353
6	LOUDSPEAKERS WIRE BUNDLE	96010145
7	BAGDE FINLUX	84701620
7	BAGDE LUXOR	UA1249
7	BAGDE SALORA	UA1245
8 ⚠	MAINS CABLE 2.25m	70003769
9 ⚠ *	PICTURE TUBE	
	(See section "Variable components", page 43)	
10	DEGAUSSING COIL HOLDER	UG0585
11	GROUNDING WIRE	96010090
12 ⚠	DEGAUSSING COIL	45820024
13	FELT PAD	80440385
14	DEGAUSSING COIL HOLDER	84488790
15	GROUNDING SPRING	81401082
16	DEGAUSSING COIL TIGHTENER	80424133
16	WIRE TIE	54040164
17	PICTURE TUBE HOLDER	84480810
18	PT-SCREW K7x30 FOR PICTURE TUBE	62034039
19 ⚠ *	CHASSIS	TX*****
	(See section "Variable components", page 43)	
20 ⚠	CRT MODULE	HH135

Item	Description	Order no.
21	CONTROL UNIT B8	SY107
21	CONTROL UNIT V3	SY106
22	CONTROL UNIT FRAME B8	84461120
22	CONTROL UNIT FRAME V3	84461150
23	MAINS BUTTON B8	80425272
23	MAINS BUTTON V3	84680530
24	COMPRESSION SPRING	UC3051
25	FLAP LOCK	80413473
26	PUSH BUTTON	63157040
27	PT-SCREW KB30x8	WC0371
28	CONTROL UNIT MODULE	FC100
29	FIRE BARRIER FOR CONTROL UNIT	84860450
30	MAINS BUTTON LEVER B8	84680680
31*	FLAP	
	(See section "Variable components", page 43)	
32 ⚠	BACK COVER 28 B8 / V3 MDB	84303690
33	PT-SCREW KB40x20	WC0354
34	PLUG FOR BACK COVER	80409631
35	PT-SCREW KB40x10 FOR CHASSIS BRACKET	WC0353
36 ⚠	MAINS SWITCH	41210004
37 ⚠	COVER FOR CAMERA CONNECTOR	84488890
38	MODULE SUPPORT	81408167
39	PLASTIC TUBE 9.5mm	86500342
	BADGE SKY DESIGN	78200289
	AUDIO LINE OUTPUT MODULE	TA100
*	SIGNAL MODULE (AV100)	AVACBAA
	(See section "Variable components", page 43)	

Mechanical parts 29" X3 / X4



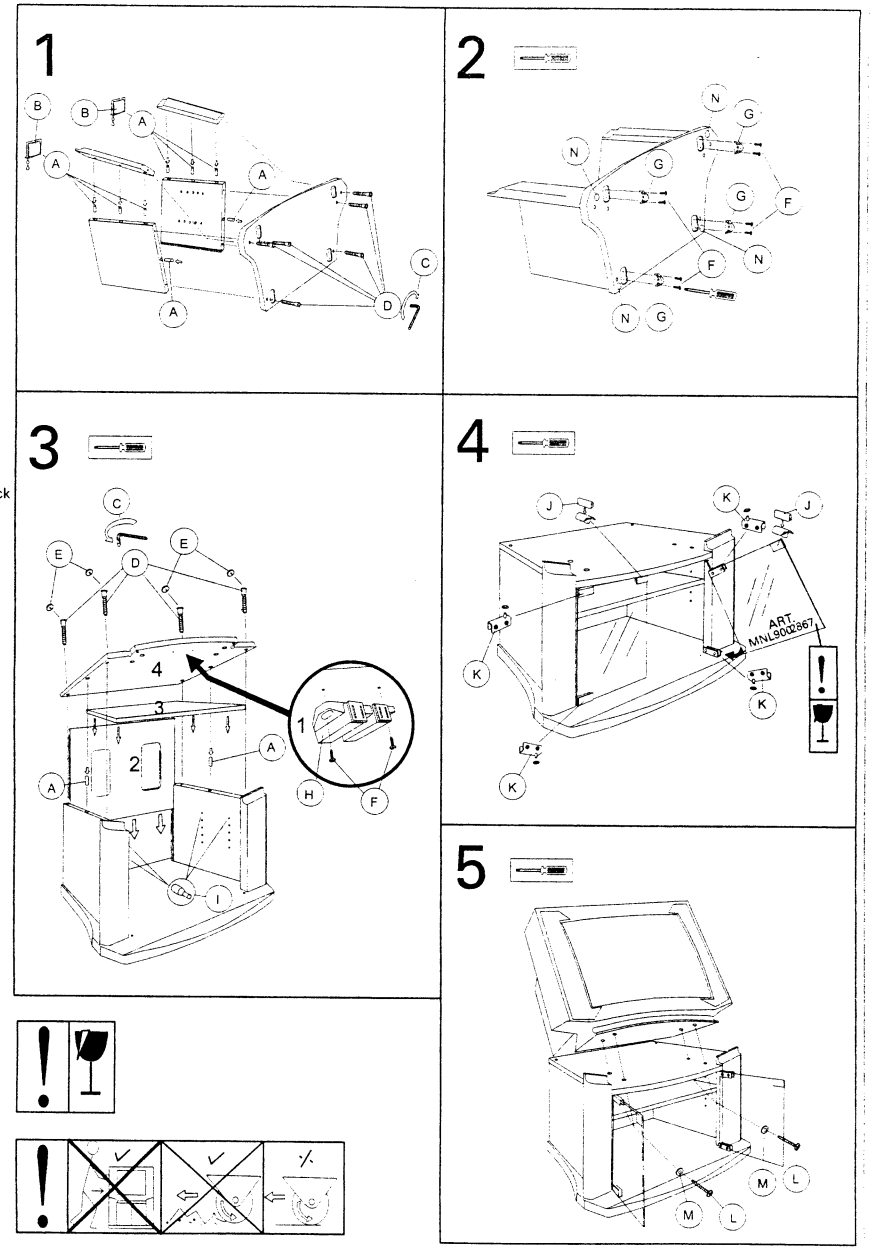
Item		Description	Order no.
1	⚠	CABINET 29 X3/4 SILVER	85101010
2		LOUDSPEAKER 8Ω	43120005
3		PT-SCREW KB40x8	WC0368
4		CHASSIS BRACKET	84488910
5		CHASSIS HOLDER	84488440
6		FOOT PAD 14.6mm	80424027
7	⚠	MAINS CABLE 2.25m	70003769
8		BADGE SALORA	UA1245
8		BAGDE FINLUX	84701620
9	⚠	PICTURE TUBE Sam A68QCP891X100	43642914
	⚠	PICTURE TUBE Sam A68QCP891X239	43642915
10		DEGAUSSING COIL HOLDER	84488900
11		DEGAUSSING COIL	45820034
12		DEGAUSSING COIL TIGHTENER	80424133
13		GROUNDING WIRE	96010103
14		GROUNDING SPRING	81401082
15		PLASTIC TUBE	86500342
16		PICTURE TUBE HOLDER	84480810
17		PT-SCREW K70x40 FOR PICTURE TUBE	WC2027
18	⚠ *	CHASSIS	
		(See section "Variable components", page 43)	
19	⚠ *	CRT MODULE	HH131
20	⚠ *	BACK COVER 29 X3/4 MDB	84303700
21		PT-SCREW KB40x20 FOR BACK COVER	WC0354
22		PLUG FOR BACK COVER *(If no subwoofer)*	80409631
23		CONTROL UNIT X3	SY104
23		CONTROL UNIT X4	SY105
24		CTRL UNIT FRAME	84461160
25		CONTROL UNIT MODULE	FC100
26		PUSH BUTTON	63157040
27		PT-SCREW KB30x8	WC0371
28		COMPRESSION SPRING	UC3051

Item		Description	Order no.
29		MAINS BUTTON X3	84680700
29		MAINS BUTTON X4	84680740
30		FLAP LOCK	80413473
31		FLAP MOTION RETARDER	84488870
32		PT-SCREW KB25x8	78360040
33	*	FLAP	
		(See section "Variable components", page 43)	
34		LENS LEFT SIDE X3	84553340
34		LENS LEFT SIDE X4	84553420
35		LENS RIGHT SIDE X3	84553470
35		LENS RIGHT SIDE X4	84553460
36		SUBWOOFER BOX	SCE073
37		SUBWOOFER BOX HOLDER	81408105
38		PLUG FOR SUBWOOFER BOX MOUNTING	UL0104
39		PT-SCREW KB40x40	WC0429
40		PICTURE TUBE SUPPORT	84488990
41		SCREW 4x12 FOR PICTURE TUBE SUPPORT	WC0344
42		DEGAUSSING COIL HOLDER	84488790
43		PT-SCREW KB40x20	WC0354
44		ABSORBER	UA1668
45		SUBWOOFER LOUDSPEAKER 16Ω	43120012
46		PT-SCREW KB40x10	WC0353
47		SUBWOOFER WIRE BUNDLE	96008820
48		MODULE SUPPORT	81408167
49	⚠	COVER FOR CAMERA CONNECTOR	84488890
50	⚠	MAINS SWITCH	41210004
51		LOUDSPEAKERS WIRE BUNDLE	96010145
		BADGE SKY DESIGN	78200289
		AUDIO LINE OUTPUT MODULE	TA100
	*	SIGNAL MODULE (AV100)	AV*****
		(See section "Variable components", page 43)	
		TWIN TUNER PIP MODULE	PP100

Rack R900 Silver (4215) 28" V3 / Rack R910 Silver (4063) 28" / B6

Item	Order no.
ASSEMBLY KIT	T9000
CASTOR	P9867
GLASS DOOR	L9002867

A X 1 — 052090
B X 24 — 120410
C X 4 — 051001
Ⓓ X 4 — Kp2550400
E X 4 — 031090
F X 2 black — 1342913
G X 1 — 030008
H X 10 — 054274
I X 4 — VK520589.1
J X 2 — 019991
K X 2 — KB5X30
Ⓛ X 4 — 030035
M X 2 — 031116



Rack R798 Digi Black (1714) 28" B8 / V3

Item	Order no.
ASSEMBLY KIT	T7000
CASTOR	P9867
GLASS DOOR	L7982867

A 052090
1pc.

B 120410
24pcs.

C 051001
4pcs.

D Kp2550400
4pcs.

E 031090
4pcs.

F 1342913
2pcs. BLACK

G 030007
1pc.

H 054274
10pcs.

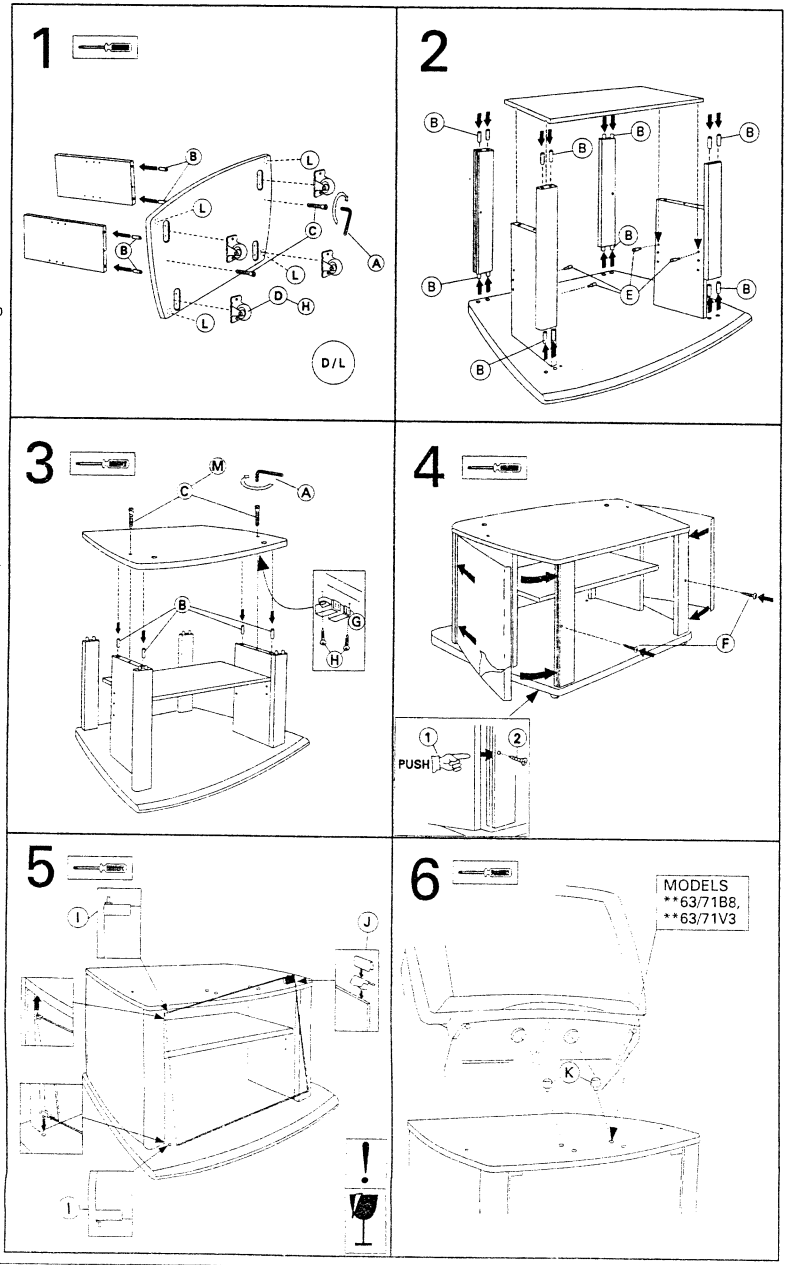
I VK520589.1
2pcs.

J 019991
1pc.

K 00800
2pcs.

L 030035
4pcs.

M 031116
2pcs.



Notes

MULTI CONCEPT 2A
TX CHASSIS
(100 Hz, 4:3)

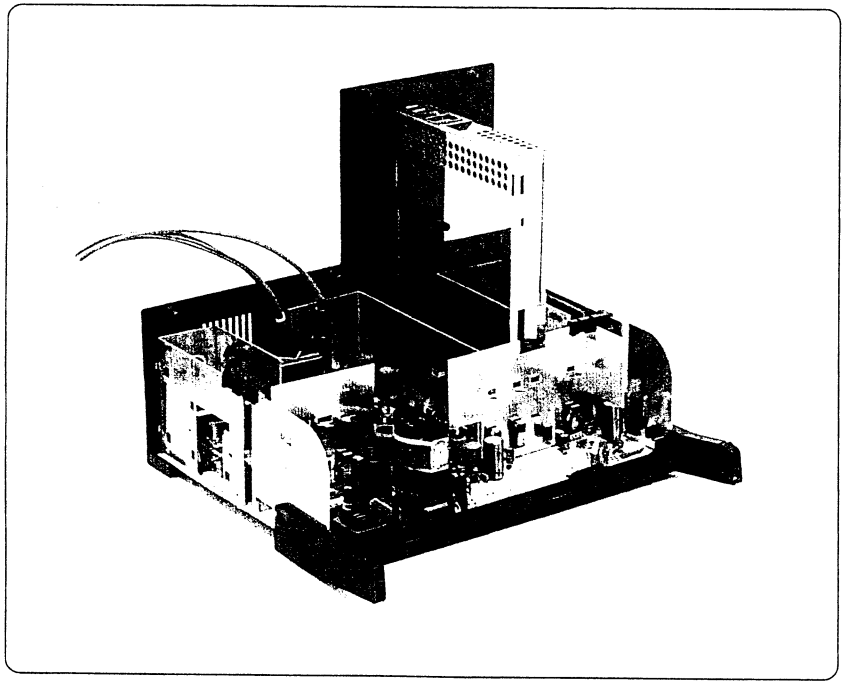
TV
2002

(GB) Supplement to service manual 66119682
(D) Ergänzung zum Service-Manual 66119682

FINLUX

71V100 MC 100 Hz BiB (429.514-3)

Marketing code	Production code	Chassis	SW version	Design	AV module	Picture tube type	/ Order no.
71V100 MC 100 Hz BiB	TX71V3RFHHB	TXBREAA	TZAE16.0	28" V3	AVECBCA	28" Phi 4:3 A66EAK071X44	43642831



66117319

(GB) Spare parts

(D) Ersatzteile

Note! Hinweis!

⚠ Safety components in accordance with existing safety regulations. These components must be replaced only with original parts.
⚠ Sicherheitsbauteil im Sinn der Sicherheitsbestimmung. Diese Teile dürfen nur durch Originalteile ersetzt werden.

TXBREAA Main board

Item	Description	Order no.
RESISTORS		
PK 1⚠	R POT FOCUS 59M 2W0	31280010
PO 1	R TRIM HOR 2K2 0W1	31110970
RA 13, 14, 19	R SMD 10K 0W10	31425833
RA 18	R METOX BK 1R0 4W0	31430013
RA 22	R SMD 1K0 0W10	31425820
RA 24, 25	R SMD 10R 0W10	31425810
RA 27, 28	R SMD 2K2 0W10	31425828
RA 30, 31	R SMD 4K7 0W10	31425824
RK 0	R CARF AX 1M0 5% 0W25	31660028
RK 1, 44	R SMD 100R 0W10	31425852
RK 3, 5, 10, 12, 56, 57	R SMD 2K7 0W10	31425821
RK 4, 52, 53, 59, 61	R SMD 100K 0W10	31425844
RK 6	R SMD 2K20 0W10	31490098
RK 7, 11, 84, 133	R SMD 10K 0W10	31425833
RK 8	R CARF RAD 15K 5% 0W25	31630033
RK 9	R SMD 430R 0W10	31425879
RK 13	R SMD 3K3 0W10	31425829
RK 14	R CARF AX 220K 5% 0W25	31660033
RK 15	R SMD 5K1 0W10	31490453
RK 16	R SMD 15K 0W10	31425835
RK 18	R SMD 150R 0W10	31425812
RK 20	R SMD 10R 0W10	31425810
RK 22⚠	R FUS V RAD 2R2 5% 0W25	31860003
RK 23, 25	JUMPER R=15,0 mm	85700150
RK 23-1⚠, 23-2⚠, 25-1⚠, 25-2⚠, 66-1⚠, 66-2⚠, 103-1⚠, 103-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
RK 30⚠	HK-RESISTOR 120R 5%LCR0207	13100232
RK 31, 33, 38, 39, 42	R SMD 2K00 0W10	31490003
RK 32, 49	R SMD 1K0 0W10	31425820
RK 46, 47	R SMD 820R 0W10	31425819
RK 48	R SMD 470R 0W10	31425817
RK 50	R METOX BK 0R47 1W5	31430011
RK 51, 82, 100	R SMD 2K2 0W10	31425828
RK 54	R SMD 4K7 0W10	31425824
RK 55⚠	R CARF RAD 0R22 5% 0W25	31514506
RK 58	R METOX BK 0R33 1W5	31430010
RK 62	R CARF AX 27R 5% 0W25	31660007
RK 63⚠, 68⚠	R FUS V RAD 0R1 0W40	31850059
RK 64⚠	R FUS V RAD 27R 5% 0W25	31860001
RK 65, 67	R CARF RAD 6K8 5% 0W25	31630029
RK 66⚠	R FUS V AX 0R47 5% 0W5	31850004
RK 69	R SMD 1M0 0W10	31425801
RK 70, 77	R CARF RAD 100K 5% 0W25	31630037
RK 72⚠, 73⚠	R FUS V AX 3R0 0W50	31850007
RK 75⚠	R CARF AX 1R5 5% 0W5	31630014
RK 76⚠	R FUS V AX 2R2 0W50	31850056
RK 81	R CARF AX 39K 0W25	31660054
RK 83⚠	R FUS V BLK 390R 10% 1W0	31850002
RK 99	R SMD 8K2 0W10	31425832
RK 101	R SMD 39K 0W10	31425841
RK 102	R SMD 82K 0W10	31425843
RO 1⚠	R PTC BLK Rs=9ohm Dual FOR DEGAUSSING	31930011
RO 2, 3, 60	R SMD 220K 0W10	31490457
RO 4	R SMD 270K 0W10	31490458
RO 5	R SMD 2K7 0W10	31425821
RO 6, 16	R SMD 24K3 0W10	31490451
RO 8	R SMD 6K8 0W10	31425831
RO 9	R SMD 18K 0W10	31425813
RO 10, 11, 12, 14	R SMD 1M0 0W10	31425801
RO 13	R METOX AX 2K7 2W	31414050
RO 15, 17	R SMD 12R 0W10	31490058
RO 18, 35	R SMD 2K2 0W10	31425828
RO 24	R SMD 1K0 0W10	31425820
RO 25	R SMD 150R 0W10	31425812
RO 26	R METF AX 0R68 0W60	31440061
RO 28	R CARF BLK 560R 0W50 AX	31650003
RO 30	R SMD 1K8 0W10	31425827
RO 32⚠	R METF AX 10M 0W50 HV	31460001
RO 33	R SMD 820R 0W10	31425819
RO 38, 39, 40, 41	R SMD 82R 0W10	31425882
RO 43	R SMD 33K 0W10	31425840
RO 49	R SMD 150K 0W10	31425846
RO 51	R SMD 180K 0W10	31490012
RO 53	R SMD 10K 0W10	31425833
RO 54	R SMD 5K1 0W10	31490453
RO 58	R SMD 100K 0W10	31425844
RO 59	R WRLAC AX 0R18 2W5	31360046
RO 59-1⚠, 59-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
RO 61	R SMD 470R 0W10	31425817
RO 62	R CARF AX 2K2 0W25	31548618
RO 67	JUMPER R= 5,0 mm	85700050
RQ 1	R SMD 22K 0W10	31425837
RQ 3, 4, 5, 6, 7	R SMD 4K7 0W10	31425824
RQ 12	R SMD 330R 0W10	31425857
RQ 14	R SMD 470R 0W10	31425817
RQ 16	R SMD 1K0 0W10	31425820
RS 1	R SMD 2K2 0W10	31425828
RS 2	R SMD 1K5 0W10	31425826
RS 3	R METF RAD 1R54 1% 0W6	31450012
RS 4	R SMD 270K 0W10	31425805
RS 5, 8	R METF RAD 1R21 1% 0W6	31450008
RS 9	R CARF RAD 27R 5% 0W25	31630021
RS 10, 11	R SMD 12R 0W10	31490058
RS 13, 14, 15	R CARF RAD 820R 5% 0W25	31630044
RS 21	R SMD 10K 0W10	31425833
RS 22	R SMD 47K 0W10	31425836
RS 23	R SMD 12K1 0W10	31490051
RS 24, 27	R SMD 5K11 0W10	31490454
RS 25, 26	R SMD 6K8 0W10	31425831
J 33, 301, 319	R SMD 0R 0W10	31425802
JQ 10	R SMD 0R 0W10	31425802
CAPACITORS		
CA 1, 2	C (M)KT RAD 220N 63V	33127108
CA 8, 9	C CER1 SMD 390P 50V	32145428
CA 13	C CER2 SMD 100N 25V	32190001
CA 17	C ECAP RAD 22U 35V	34540021
CA 18, 20	C ECAP BLK 3300U 35V	34510009
CA 19	C CER2 SMD 100N 50V	32536223
CA 21, 22	C CER2 SMD 22N 50V	32536221
CA 24, 25	C ECAP BLK 470U 35V	34220648
CK 1	C CER1 SMD 220P 50V	32125513
CK 2, 41	C CER2 SMD 10N 50V	32536213
CK 3, 6	C ECAP RAD 220U 25V	34229784
CK 4	C (M)KT RAD 1U5 63V	33120948
CK 5	C (M)KT RAD 100N 63V	33127106
CK 9	C CER1 SMD 56P 50V	32125526
CK 10, 28	C (M)KT RAD 220N 63V	33127108
CK 12	C ECAP RAD 100U 16V	34223252
CK 13	C CER1 SMD 330P 50V	32125517
CK 14	C ECAP RAD 47U 63V	34540053
CK 15	C ECAP BLK 2200U 25V	34510005
CK 16	C (M)KT RAD 22N 400V	33150965
CK 17⚠, 23⚠	C (M)KC BLK 330N 250V	33660001

Item		Description	Order no.
CK	17-1⚠, 17-2⚠, 18-1⚠, 18-2⚠, 23-1⚠, 23-2⚠, 24-1⚠, 24-2⚠, 32-1⚠, 32-2⚠, 33-1⚠, 33-2⚠, 36-1⚠, 36-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
CK	18	C (M)KP BLK 820P 1K5V	33450039
CK	19⚠	C ECAP BLK 4U7 250V HV	34610001
CK	20	C (M)KT BLK 100N 250V	33360003
CK	21	C CER2/3 RAD 2N2 20% 500V	32780003
CK	22	C CER2/3 RAD 330P 10% 500V	32780002
CK	24	C (M)KP BLK 470P H 1K6V	33460011
CK	25	C (M)KP BLK 15N H 100V	33460003
CK	26⚠	C (M)KP BLK 10N 1K6V	33450037
CK	26-1⚠, 26-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
CK	27⚠	C (M)KP BLK 30N 3,5% 630V	33450064
CK	27-1⚠, 27-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
CK	29⚠	C (M)KP BLK 560N 250V	33460021
CK	29-1⚠, 29-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
CK	30, 44	C (M)KT RAD 470N 63V	33127123
CK	30-1⚠, 30-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
CK	31-1⚠, 31-2⚠, 34-1⚠, 34-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
CK	32⚠, 33⚠	C (M)KP BLK 56N 400V	33450061
CK	34⚠	PROPKO 300n 5% 250V	22171302
CK	42	C CER2 SMD 100N 25V	32190001
CO	1⚠, 4⚠	C CER2/3 BLK 1N0 20% 400VAC Y	32610922
CO	2⚠	C (M)KT BLK 220N 400V	33360002
CO	3⚠, 7⚠	C MP/P BLK 470N 275VAC X2	33260006
CO	3-1⚠, 3-2⚠, 7-1⚠, 7-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
CO	5	C CER1 SMD 1N0 50V	32180035
CO	6	C CER1 SMD 56P 50V	32125526
CO	8	C (M)KP RAD 1N0 H 100V	33622914
CO	9	C CER2 SMD 3N3 50V	32536207
CO	10, 14, 48	C CER1 SMD 1N0 50V	32125545
CO	11	C CER2 RAD 220P 500V	32790062
CO	12, 50, 51, 52, 53, 55, 56, 60, 63, 65	C CER2 SMD 100N 25V	32190001
CO	13	C ECAP RAD 47U 63V	34540053
CO	15	C (M)KP BLK 4N7 H 1K6V	33450019
CO	15-1⚠, 15-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
CO	19	C ECAP BLK 220U 450V HV	34540102
CO	20	C (M)KT RAD 1U0 63V	33124758
CO	21	C (M)KP BLK 220P 1K6V	33460009
CO	22	C (M)KT BLK 10N 630V	33380023
CO	23⚠	C CER2/3 BLK 1N5 20% 400VAC Y	32960002
CO	24⚠	C CER2/3 RAD 330P 10% 500V Y	32780002
CO	25⚠, 26⚠, 27⚠	C CER2/3 RAD 1N0 10% 500V Y	32780004
CO	29, 54	C (M)KT BLK 100N 250V	33360003
CO	31	C ECAP BLK 2200U 35V	34226678
CO	32	C ECAP BLK 1000U 35V	34510010
CO	33, 34, 39, 40, 41, 42	C (M)KT RAD 100N 63V	33127106
CO	36⚠	C ECAP BLK 220U 250V HV	34610007
CO	43, 44	C ECAP BLK 1000U 16V	34510004
CO	45	C ECAP RAD 10U 63V	34540025
CO	49	C CER2 SMD 10N 50V	32536213
CO	58, 59, 62, 64	C ECAP RAD 100U 16V	34223252
CQ	1	C CER1 SMD 56P 50V	32125526
CQ	2	C CER1 SMD 1N0 50V	32125545
CQ	4	C ECAP RAD 10U 63V	34540025
CQ	5, 6, 8, 9	C CER2 SMD 100N 25V	32190001
CQ	10	C ECAP RAD 100U 16V	34223252
CS	1	C (M)KT RAD 100N 63V	33127106
CS	3	C (M)KT BLK 47N 100V	33380019
CS	4	C (M)KP RAD 10N 250V	33450057
CS	5	C (M)KT RAD 470N 63V	33127123
CS	6	C CER2 SMD 100N 25V	32190001
CS	7	C ECAP RAD 47U 63V	34540053
CS	8, 10, 11, 12	C CER2 SMD 10N 50V	32536213

TRANSISTORS

TA	5	TR NPN SMD BC847B 45V	36145312
TK	1, 2, 4, 9	TR PNP SMD BC857B 45V	36145412
TK	3	TR NPN PWR BLK 2SD2012 60V 3A	36270004
TK	3, 12	HEATSINK SPRING	79400021
TK	6, 19, 25	TR NPN SMD BC847B 45V	36145312
TK	8	TR NPN RAD BC637 60V 1A	36220003
TK	10	N-FET PWR BLK BUK457-400B 400V 11A	36370003
TK	11	TR NPN RAD BF422 250V	36125217
TK	12	TR NPN PWR BLK BU2525AF 1K5V 12A	36270003
TO	1-2⚠, 1-3⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
TO	1	N-FET BLK STP7NC70Z 700V 6,8A	36370018
TO	1	INSULATOR FOIL 247 1k5V	49000088
TO	1	HEATSINK SPRING	79400021
TQ	1	TR NPN SMD BC847B 45V	36145312
TS	5, 6, 7, 8, 9, 10	TR PNP SMD BC857B 45V	36145412

DIODES

DK	1, 2, 3, 5, 6	DIODE SMD BAS16 75V	36560318
DK	9, 12	DI RECT PWR AX BYV36C 600V 1,6A	36575452
DK	11, 14	DI RECT PWR AX 1N4937 600V 1,0A	36575353
DK	13	DI AX RECT BYT56J 600V 1,5A	36240001
DK	15	DI RECT PWR AX BYV26C 600V 1,0A	36610005
DK	16	DI BK RECT BYM357X DAMPER+MODULATOR	36621564
DK	16	HEATSINK SPRING	79400021
DK	16-1⚠, 16-2⚠, 16-3⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
DO	1, 2, 6, 16	DI AX RECT BYM36E 1K0V 2,9A	36621562
DO	2, 16	DIODE COOLING PLATE	81402597
DO	3, 4	DI RECT PWR AX BY527 1K25V	36610001
DO	3-2⚠, 4-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
DO	4-1⚠, 6-1⚠, 6-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
DO	7-1⚠, 7-2⚠, 12-1⚠, 12-2⚠, 13-1⚠, 13-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
DO	9, 21	DIODE SMD BAS16 75V	36560318
DO	12	DI BK RECT FMC-G28SL 800V 5,0A	36621567
DO	12, 13	HEATSINK SPRING	79400021
DO	13	DI BK RECT STTA506F 600V 5,0A	36621563
DO	14	DI SMD BAS20 150V 200mA	36560320

Item		Description	Order no.
DO	16-1⚠, 16-2⚠, 22-1⚠, 22-2⚠, 26-1⚠, 26-2⚠, 1-1⚠, 1-2⚠, 2-1⚠, 2-2⚠, 3-1⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
DO	17, 18	DI RECT AX BYW98 200V 3A	36575470
DO	17, 18	DIODE COOLING PLATE -2	81402596
DO	19	IC VREF TL431CLP	37410012
DO	22, 26	DI AX SCHT SB560 60V 5,0A	36420005
DS	1	DIODE SMD BAS16 75V	36560318

ZENERS

ZDK	2	Z DIODE SMD BZX84B 24V 2%	36780022
ZDK	3, 10	Z DIODE SMD BZX84B 12V 2%	36780008
ZDK	4	Z DIODE SMD BZX84C 51V 5%	36770035
ZDK	5	Z DIODE SMD BZX84C 2V4 5%	36780005
ZDO	1, 11	Z DIODE SMD BZX84B 12V 2%	36780008
ZDQ	1	Z DIODE SMD BZX84B 30V 2%	36770033

INTEGRATED CIRCUITS

ICA	2	IC AUDIO TDA2616 12+12W	37631259
ICA	2	HEATSINK SPRING	79400021
ICO	1	IC PWR CONT TDA16846	37450019
ICO	3⚠	IC OPTO COUPL SFH615A-2	36950009
ICO	5, 6	IC V-REG PQ05RH11 5V 1,5A FULLMOLD	37460008
ICO	5, 6, 8, 11	HEATSINK SPRING	79400021
ICO	8	IC V-REG PQ3RD13 3V3 1,0A FULLMOLD	37460033
ICO	11	IC V-REG L7812CV 12V 1,5A	37681748
ICS	1	IC DEFL TDA8354Q/N1I/N1E	37450017
ICS	1	HEATSINK SPRING	79400021

FUSES

FO	1⚠	FUSE F2,5A MINIATURE D=8,5	43770004
FO	1-1⚠, 1-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
FO	2⚠, 4⚠, 7⚠, 8⚠	FUSE T2,0A MINIATURE D=8,5	43770005

TRANSFORMERS

TRK	1	TRAFO 545 01 204 00	45380013
TRK	2⚠	DST TRAFO 1372,9018	45360083
TRK	2-1⚠, 2-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
TRK	2-5⚠, 2-7⚠, 2-9⚠, 2-10⚠, 2-13⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
TRK	2-16⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
TRK	3-1⚠, 3-3⚠, 3-4⚠, 3-6⚠, 4-2⚠, 4-5⚠, 4-9⚠, 5-1⚠, 5-3⚠, 5-4⚠, 5-6⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
TRK	5⚠	COIL BLK RAD 68uH 15% E/W	45380024
TRO	2⚠	MAINS TRAFO 2322,0030	45320069
TRO	2-8b⚠, 2-10⚠, 2-10b⚠, 2-19⚠, 2-20b⚠, 2-21⚠, 2-22⚠, 2-22b⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009

COILS

L	1, 2, 3	EMI SUPPRES BEAD 3,5x9	45620007
LK	1	COIL LIN BLK EKM12-136	45161283
LK	1-1⚠, 1-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
LK	1-3⚠, 1-4⚠, 2-1⚠, 2-2⚠, 5-1⚠, 5-2⚠, 6-1⚠, 6-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
LK	2	COIL BLK 280uH FJ1311	45610004
LK	3	COIL BLK 1,9mH 14R DRM0630192010K-01	45610018
LK	4	EMI SUPPRES BEAD 3,5x9	45620007
LK	5, 6	COIL BLK 47uH 7% 1,7A RAD	45620035
LO	1⚠	COIL MAINS BLK TRE293/30H	45390023
LO	1-1⚠, 1-2⚠, 1-3⚠, 1-4⚠, 8-4⚠, 9-1⚠, 9-2⚠, 9-3⚠, 9-4⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
LO	3	EMI SUPPRES BEAD 3,5x9	45620007
LO	5, 6, 7	COIL BLK 10uH 1200mA RAD	45571699
LO	8	COIL BLK 1,5mH 1,7A 250V	45390020
LO	10	COIL AX 10uH 1200mA	45571698
LQ	1	COIL BLK 10uH 1200mA RAD	45571699
LQ	3, 4	COIL AX 10uH 1200mA	45571698

OTHERS

A	6, 7, 8, 9	KONTAKTFEDER	84880130
HCK	17_1-1⚠, 23_1-1⚠, 29-1⚠, 34-1⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
HXKT	1-1⚠, 2-1⚠, 3-1⚠, 4-1⚠, 7-1⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
HXKT	8⚠, 9⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
J	4, 6, 15, 45, 54, 61, 89, 121, 131, 137, 138, 151, 173, 193, 198, 203, 211, 219, 220, 222	JUMPER R=15,0 mm	85700150
J	8, 55, 73, 81, 92, 113, 114, 123, 139, 140, 166, 169, 188, 191, 213, 216	JUMPER R=17,5 mm	85700175
J	12, 19, 21, 22, 23, 25, 39, 40, 41, 42, 43, 44, 50, 57, 60, 71, 76, 83, 84, 96, 158, 161, 167, 180, 185, 187, 195, 204, 207, 218, 221, 306, 311, 312, 313, 315	JUMPER R=12,5 mm	85700125
J	49, 51, 53, 67, 68, 74, 75, 77, 98, 124, 134, 148, 164, 178, 181, 186, 199, 201, 217, 304	JUMPER R=20,0 mm	85700200

Item		Description	Order no.
J	93, 100, 103, 108, 142, 145, 146, 147, 162, 163, 179, 194, 200, 202, 206, 208, 210, 212, 215, 302, 303, 305	JUMPER R=10,0 mm TL0,6	85700100
J	194-1⚠, 194-2⚠, 195-1⚠, 195-2⚠, 198-1⚠, 198-2⚠, 200-1⚠, 200-2⚠, 202-1⚠, 202-2⚠, 315-1⚠, 315-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
J	168, 307	JUMPER R= 7,5 mm	85700075
J	300	JUMPER R=15,0 mm	85700150
L	1-1⚠, 1-2⚠, 2-1⚠, 2-2⚠, 3-1⚠, 3-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
TU	1	TUNER 4046 FM5 IEC	58231061
XA	2	ROW CONN 4-PIN VERT LOCK	73190604
XAV	1	CONN ROW 9-PIN VERT LOCK	41710068
XAV	2, 3	CONN ROW 19-PIN VERT LOCK	41710073
XK	3	ROW CONN 5-PIN VERT LOCK	41710001
XK	3-1⚠, 3-2⚠, 3-3⚠, 3-4⚠, 3-5⚠, 7-1⚠, 7-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
XK	6	CONN HEADER 6-PIN PITCH	41710002
XKT	1	BLADE CONN 2,8MM FOR PCB MALE	41930001
XO	1	ROW CONN 2-PIN VERT LOCK	73184750
XO	1-1⚠, 1-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
XO	2	STIFTW.KA. 5,08 SW	73190702
XS	1	ROW CONN 3-PIN VERT LOCK	73190603
XT	1, 2	CONN ROW 7-PIN VERT LOCK	41710077
		INS SLEEVE FOR CONN BLADE 2,8mm	47310004
		ANTENNA CABLE ASSY 200mm RCA/IEC PLUG WITH FERRITE	47780009
		HOLDER CLIP FOCUS 3mm	54041366
		HOLDER CLIP ANODE 4mm	54041417
		CHASSIS HOLDER LEFT	80409535
		CHASSIS HOLDER RIGHT	80409559
		WIRE HOLDER	84486070
		CONNECTING PLATE COOLING PLATE	84488470
		CONNECTING PIECE	84488881
		JUMPER R= 5,0 mm	85700050
	⚠	ANODE CABLE DST	
	⚠	570mm+CHIMNEY	96008868
	⚠	FOCUS CABLE 1,2 410MM	96010142
	⚠	SCREEN CABLE 460mm	96010244
	⚠	ELDOR-DST CABLE 280MM	96011091

AVECBCA Signal module

RESISTORS

Item		Description	Order no.
RAV	0	R CARF AX 56R 0W25	31660046
RAV	1, 2, 3, 6, 9, 11, 12, 13, 16, 17, 29, 31, 202, 203, 204, 206, 207, 208, 209, 211, 212, 213, 214, 303, 311, 318	R SMD 75R 0W10	31425861
RAV	4, 14, 32	R SMD 15K 0W10	31425835
RAV	7, 18, 21, 44, 63, 99, 108, 114, 117, 119, 125, 126, 128, 132, 134, 138, 141, 223, 226, 246, 224, 337	R SMD 470R 0W10	31425817
RAV	8, 51, 61, 69, 93, 94, 158, 247, 249, 251, 252, 256, 257, 258, 279	R SMD 1K0 0W10	31425820
RAV	19, 22, 269, 342	R SMD 330R 0W10	31425857
RAV	23, 24, 26, 34, 42, 43, 82, 101, 102, 109, 111, 280, 306, 313, 321, 333	R SMD 220R 0W10	31425815
RAV	27, 33, 41, 46, 49, 57, 58, 64, 66, 67, 68, 76, 87, 89, 156, 191, 193, 218, 248, 276, 281, 286, 287, 288, 353	R SMD 10K 0W10	31425833
RAV	28⚠	R FUS V RAD 4R7 5% 0W25	31860002
RAV	36, 60, 98, 107, 113, 116, 118, 121, 124, 127, 131, 133, 137, 139	R SMD 100K 0W10	31425844
RAV	37, 56, 284, 289	R SMD 22K 0W10	31425837
RAV	38, 356	R SMD 27K 0W10	31425839
RAV	39, 88, 282, 304, 312, 319, 327, 334, 336	R SMD 2K2 0W10	31425828
RAV	47⚠	R FUS V RD 47R 0W25	31860006
RAV	48, 84, 86	R SMD 47K 0W10	31425836
RAV	52, 53, 92, 96, 97, 216, 217, 277, 278, 283, 285, 348, 349	R SMD 270R 0W10	31425855
RAV	54, 91, 299, 307, 314, 322, 341	R SMD 390R 0W10	31425816
RAV	55	R SMD 0R 0W10	31425802
RAV	59, 71, 72, 77, 83, 244	R SMD 4K7 0W10	31425824
RAV	62	R SMD 150R 0W10	31425812
RAV	73, 74, 78, 81, 106, 123, 129, 136, 142, 144, 183, 184, 186, 187, 188, 189, 222, 235, 259, 261, 300, 301, 308, 316, 323, 331, 332	R SMD 100R 0W10	31425852
RAV	103, 104, 112, 143	R SMD 220K 0W10	31425847
RAV	105, 110, 196, 201, 344, 346	R SMD 33K 0W10	31425840
RAV	146, 147, 148, 149, 151, 152, 153, 154	R SMD 1M0 0W10	31425801
RAV	192, 198	R SMD 47R 0W10	31425809
RAV	194, 197, 351	R SMD 68K 0W10	31425838
RAV	199	R CARF RAD 180R 5% 0W25	31630026
RAV	237, 238	R CARF AX 270R 0W25	31548624
RAV	239, 241, 242, 290	R SMD 3K9 0W10	31425830
RAV	243, 253, 254	R SMD 1K5 0W10	31425826
RAV	265, 302, 309, 317, 324	R SMD 22R 0W10	31425849
RAV	295	R SMD 1K8 0W10	31425827
RAV	326	R SMD 33R 0W10	31425808
RAV	338	R SMD 910R 0W10	31425883
RAV	339	R SMD 430R 0W10	31425879
RAV	343	R SMD 300R 0W10	31425856
RAV	347, 354	R SMD 18K 0W10	31425813
RAV	352	R SMD 6K81 0W10	31490455
RAV	355	R NTC SMD 33k	31910002

CAPACITORS

Item		Description	Order no.
CAV	1, 2, 3, 4, 6, 7, 9, 11, 21, 22, 67, 69, 72, 77, 82, 87, 111, 164, 173, 179	C CER1 SMD 390P 50V	32145428
CAV	8, 23, 26, 28, 41, 260, 265	C ECAP RAD 2U2 63V	34540023
CAV	12, 102, 106, 107, 142, 167, 187, 216, 219, 233, 240, 250, 255, 263, 268, 279, 280, 289	C ECAP RAD 10U 63V	34540025
CAV	13	C CER1 SMD 220P 50V	32125513
CAV	14, 215	C CER1 SMD 10P D 50V	32125506
CAV	16	C (M)KT RAD 1U0 63V	33124758
CAV	17, 24, 56, 64, 118, 121, 238, 239, 241, 246, 247, 248, 249, 252, 251, 253, 254, 256, 257, 258, 259, 285, 287, 288	C CER2 SMD 10N 50V	32536213
CAV	18	C ECAP RAD 470U 16V	34220551
CAV	19, 29, 32, 33, 34, 37, 38, 39, 44, 47, 49, 51, 60, 61, 101, 103, 112, 143, 166, 188, 120, 139, 212, 213, 214, 217, 218, 221, 223, 228, 229, 232, 236, 237, 242, 270, 271, 272, 278, 282, 283, 284, 286, 294	C CER2 SMD 100N 25V	32190001
CAV	27, 146, 148, 151, 153, 156, 158, 162, 171, 182	C CER2 SMD 220N 16V	32525900
CAV	31	C CER1 SMD 22P 50V	32180027
CAV	36, 168, 178	C ECAP RAD 47U 50V	34540028
CAV	42, 43, 202, 203, 226, 227	C CER1 SMD 33P 50V	32125507
CAV	46, 48, 52, 117, 119, 222	C ECAP RAD 100U 25V	34540020
CAV	53, 62, 73, 78, 83, 88, 234	C ECAP RAD 22U 35V	34540021
CAV	54, 63, 74, 79, 84, 89, 90, 91, 92, 93, 113, 116, 122, 123, 124, 176, 269	C CER1 SMD 1N0 50V	32125545
CAV	57, 58, 59, 66, 68, 71, 76, 81, 86, 94	C CER2 SMD 330N 16V	32525901
CAV	65, 125, 141, 231	C ECAP RAD 47U 16V	34223251
CAV	96, 97	C CER1 SMD 1P2 50V	32180008
CAV	98, 99, 105, 108, 293	C CER1 SMD 47P 50V	32125508
CAV	104	C ECAP RAD 3U3 63V	34540029
CAV	137, 138, 245	C ECAP RAD 1U0 100V HV	34229675
CAV	144, 147, 149, 152, 154, 157, 159	C CER1 SMD 330P 50V	32125517
CAV	161, 169, 177, 191, 193	C CER2 SMD 47N 50V	32536222
CAV	163, 172, 181, 189, 194	C CER1 SMD 1N550V	32190025
CAV	183	C CER2 SMD 680N 10V	32525905
CAV	184, 186	C CER1 SMD 6P8 D 50V	32190009
CAV	192, 196, 197	C CER2 SMD 68N 50V	32790052
CAV	199, 291	C CER1 SMD 82P 50V	32125531
CAV	224	C (M)KT RAD 470N 63V	33127123
CAV	243, 244	C CER1 SMD 39P 50V	32125512
CAV	262, 267, 281	C CER1 SMD 2N250V	32190026
CAV	264, 266	C CER1 SMD 27P 50V	32125509
CAV	275	C CER1 SMD 100P 50V	32125515
CAV	277	C ECAP RAD 4U7 63V	34540024
CAV	297	C CER2 SMD 470N 16V	32525903

TRANSISTORS

Item		Description	Order no.
TAV	1	TR NPN RAD BC547B 45V	36220002
TAV	2, 3, 7, 8, 9, 11, 12, 13, 16, 18, 20, 22, 23, 26, 27, 29, 31, 33, 34, 37, 38, 39, 41, 42, 43, 44	TR NPN SMD BC847B 45V	36145312
TAV	4, 24, 25, 28, 32, 35, 36	TR PNP SMD BC857B 45V	36145412
TAV	14	TR PNP RAD BC557B 45V	36146424

DIODES

Item		Description	Order no.
DAV	1	DIODE SMD BAV70 70V	36561954
DAV	2, 3	DI SMD LS4148 75V 200mA	36490002
DAV	9, 11, 12, 13	DIODE SMD BAS16 75V	36560318

ZENERS

Item		Description	Order no.
ZDAV	1, 2, 4	Z DIODE SMD BZX84C 8V2 5%	36780003
ZDAV	3	Z DIODE AX BZX83C 10V 5%	36770002
ZDAV	5	Z DIODE SMD BZX84B 5V6 2%	36780021
ZDAV	6	Z DIODE SMD BZX84C 3V3 5%	36770018

INTEGRATED CIRCUITS

Item		Description	Order no.
ICAV	1	IC VIDEO TEA6417	37440012
ICAV	**2**	**IC EPROM 1MX8 M27C801-150F1 CURRENT SOFTWARE VERSION 25.03.2002**	**TZAE16.0**
ICAV	2	IC SOCKET DIL32	41520751
ICAV	3	IC-TL7705ACDR	37460011
ICAV	4	IC LOGIC SMD 74HCT08 14	37810023
ICAV	5	IC uC SMD SDA30C264M2	37857014
ICAV	6, 10	IC OPAMP SMD MC33078D8	37470007
ICAV	7	IC AUDIO MSP3410G-PP-B8-V3	37430037
ICAV	11	IC VIDEO SMD VPC3230D-QA-B3	37850222
ICAV	12	IC VIDEO SMD SDA9400	37850224
ICAV	13	IC VIDEO SMD SDA5275-3P	37857044
ICAV	15	IC DRAM SMD 4Mx4 MSM5116400D-60J26	37688004
ICAV	16	IC VIDEO SMD SDA9489X-B31	37850241
ICAV	18	IC VIDEO SMD DDP3310B-PT-F6	37850234
ICAV	19	IC EEPROM SMD 4kx8 24LC32A	37866011

COILS

Item		Description	Order no.
LAV	1, 2, 3, 4	COIL SMD 2.2uH 30mA	45640023
LAV	8	COIL RAD 10uH 600mA	45571680
LAV	9, 10, 11, 12, 13, 14, 16	COIL SMD 3.3uH 30mA	45640024
LAV	17, 18, 19, 26, 27, 28, 29, 30, 31, 32	COIL BLK 10uH 1200mA RAD	45571699

Item	Description	Order no.
LAV 23	COIL SMD 6.8uH 15mA	45640025
LAV 24, 33	COIL SMD 10uH 15mA	45640026
CRYSTALS		
ZAV 1	CRYSTAL RAD 12.00MHz	45730005
ZAV 2	CRYSTAL BLK 18.432 MHz	45710011
ZAV 4	CRYSTAL BLK 20.250 MHz	45730011
ZAV 6	CRYSTAL RAD 20.48MHz	45730004
ZAV 7	CRYSTAL RAD 20.250 MHz	45710006
ZAV 8	CRYSTAL BLK 5.000 MHz	45730012
OTHERS		
XAF 1	CONN HEADER 20-PIN	41710071
XAH 1	CONN HEADER 10-PIN	41710070
XAV 1	MODULE CONN 9-PIN	41720002
XAV 2, 3	CONN MODULE 19-PIN	41720048
XAV 4	SCART CONNECTOR, BLACK	41450292
XAV 5	SCART CONNECTOR, BLUE	41910004
XAV 6	SCART CONNECTOR, ORANGE	41910005
XAV 9	CONN MODULAR 6-PIN	41910002
JAV 2, 4, 9, 15, 16, 23, 26, 27, 28, 32, 36, 38, 39, 41, 42, 44, 45, 47, 48, 49	R SMD 0R 0W10	31425802
JAV 6, 7, 8	JUMPER R=20,0 mm	85600102
JAV 13, 29, 40	JUMPER R=12,5 mm	85600078
JAV 46	JUMPER R=17,5 mm	85600092
W 1, 2	JUMPER R=75	85500855
	SUPPORT PAD	66390038
	AV MODULE BRACKET	84481920
	SIGNAL BOX BOTTOM	84860590
	SIGNAL BOX LID	84860600

FC101 Control unit module

Item	Description	Order no.
RESISTORS		
RFC 1, 2, 31	R SMD 47K 0W10	31425836
RFC 3, 4	R SMD 75R 0W10	31425861
RFC 5	R SMD 470R 0W10	31425817
RFC 7	R SMD 22K 0W10	31425837
RFC 9, 12	R SMD 1K0 0W10	31425820
RFC 10, 16	R SMD 15K 0W10	31425835
RFC 13	R SMD 330R 0W25	31425614
RFC 14, 17	R SMD 100K 0W10	31425844
RFC 19, 20	R SMD 10K 0W10	31425833
RFC 21, 22	R CARF AX 2K2 5% 0W25	31660037
RFC 26	R CARF AX 100R 0W25	31660049
RFC 27⚠	R FUS V RD 150R 0W25	31860004
RFC 37	R SMD 10K 0W25	31425635
RFC 41	R SMD 390R 0W10	31425816
RFC 43, 44, 45, 48, 49	R SMD 1M0 0W10	31425801
RFC 47	R SMD 270R 0W10	31425855
RFC 52⚠	R FUS V AX 4K7 0W50	31850009
RFC 55	R SMD 4K7 0W10	31425824
RFC 56⚠	R FUS V RD 47R 0W25	31860006
J 2, 5, 31, 33, 38, 48, 49, 51, 52, 53	R SMD 0R 0W10	31425802
JFC 10	R SMD 0R 0W25	31425601
JFC 14, 15, 16, 17	R SMD 0R 0W10	31425802
CAPACITORS		
CFC 1⚠, 2⚠	C MP/P BLK 100N 275VAC X2	33260003
CFC 3	C ECAP RAD 470U 10V	34221242
CFC 4	C ECAP BLK 1000U 16V	34550001
CFC 5, 7	C CER2 SMD 4N7 50V	32536210
CFC 8, 20	C ECAP RAD 10U 35V	34540027
CFC 10, 13	C CER1 SMD 390P 50V	32145428
CFC 11, 16, 17, 18, 19, 32	C CER2 SMD 10N 50V	32536213
CFC 14, 15	C ECAP RAD 100U 25V	34540020
CFC 21, 22	C CER1 RAD 15P 100V	32180003
CFC 27	C ECAP RAD 2U2 400V	34540097
CFC 35	C CER2 SMD 100N 25V	32190001
CFC 36	C CER2 RAD 47P 1K0V	32790054
CFC 42	C CER2 RAD 1N5 S 2K0V	32670976
TRANSISTORS		
TFC 3, 5, 6, 7, 8	TR NPN SMD BC847B 45V	36145312
DIODES		
DFC 1	DI RECT PWR AX BYV36C 600V	36575452
DFC 4	LED RAD LS5460HL RED 5mm	36910004
DFC 6, 7	DI RECT PWR AX BY527 1K25V 2AD57	36610001
DFC 11-1⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
DFC 17	LED RAD LG5460GK GREEN 5mm	36910005
	DI TRC BLK MAC9M 600V 8A	36471103
	THYRISTOR HOLDER SPRING	UC0859
ZENERS		
DZFC 1	Z DIODE AX BZX55B 4V3 2%	36770031
INTEGRATED CIRCUITS		
ICFC 1	IC PWR CONT TNY253P	37410032
ICFC 2⚠	IC OPTO TRIAC TLP763JF	36950010
ICFC 3⚠	IC OPTO COUPL SFH615A-2	36950009
FUSES		
FFC 1⚠	FUSE T3,15A HIGH BREAK 5X20MM	43751652
FFC 1⚠	FUSEHOLDER CLIPS 5*20MM	41540001
TRANSFORMERS		
MFC 2⚠	MAINS TRAFO 2262,0029B/TM2673	45310006
MFC 1-1⚠, 1-2⚠, 1-3⚠, 1-4⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
COILS		
LCF 1, 2	COIL AX 40uH 2000mA	45620057
LFC 3, 4, 7, 8, 9	COIL SMD 10uH 15mA	45640026
LFC 5, 6	COIL SMD 2,2uH 30mA	45640023
LFC 10	COIL BLK 10uH 1200mA RAD	45571699

Item	Description	Order no.
LFC 2-1⚠, 2-2⚠, 1-1⚠, 1-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
MFC 1⚠	COIL MAINS BLK TRE293/30H	45390023
OTHERS		
A 2, 4	MODULE SUPPORT	81408167
HFC 1	IR-RECEIVER TSOP1738 3-PIN	58880977
DFC 9	JUMPER R=12,5 mm	85600078
SWFC 1, 2, 3, 4	TACTILE SWITCH 4	41150685
UFC 1-1⚠, 1-2⚠, 1-3⚠, 1-4⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
UFC 1⚠	MAINS SWITCH 250V 6/120A	41210011
XA 5	SIGNAL CABLE 20-PIN 600mm	96010197
XFC 1-1⚠, 1-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
XFC 1	ROW CONN 2-PIN VERT LOCK	73184750
XFC 6	CONN RCA 3 IN ROW	41430747
XFC 9	CONN S-VHS FOR PCB 90-DEG	41452244
XFC 10	CONN PHONO 3,5mm JACK WITH SENSE SWITCH	41910001
XO 2-1⚠, 1-1⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
XO 2 ⚠	WIREPLUG FOR 2-PIN 410mm COVER FOR CAMERA CONNECTOR	96008011 84488890
J 50	JUMPER R=20,0 mm	85600102
J 54	JUMPER R=10,0 mm	85600061
J 50-1⚠, 50-2⚠	CONN GRIPLET FOR 2-SIDED PCB d=1,9mm	41930009
J 1, 3, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 39	JUMPER R=12,5 mm T	85600078

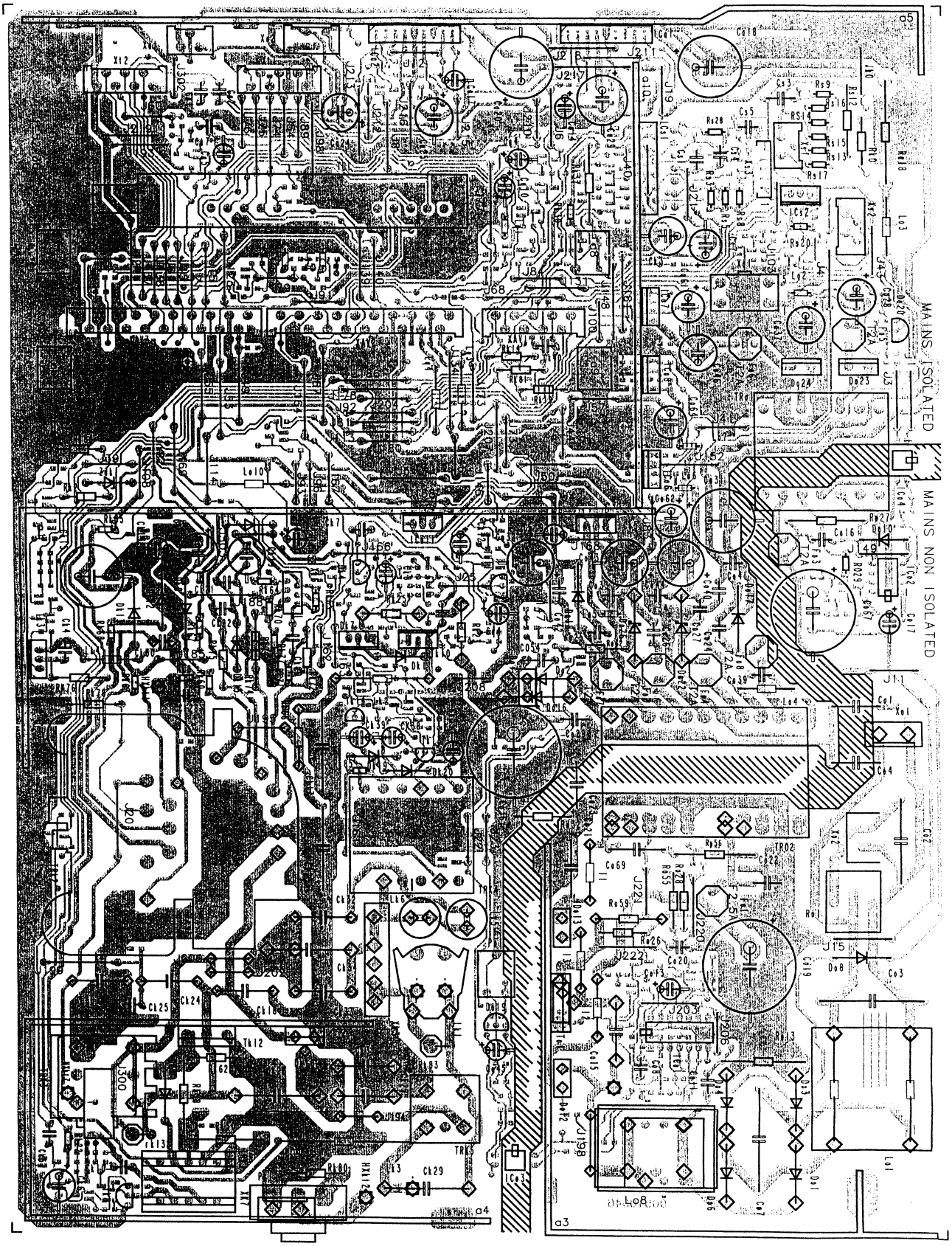
HH135 CRT module

Item	Description	Order no.
RESISTORS		
RH 1	R SMD 3K0 0W10	31490062
RH 2	R SMD 1K00 0W10	31490056
RH 3, 12, 16	R SMD 0R 0W10	31425802
RH 4, 13, 17	R METF AX 68K 2% 1W0/73	31440008
RH 6, 7, 8, 9, 11, 14	R SMD 1K5 0W10	31425826
RH 18, 19, 21, 22, 23, 24	R COMP AX 470R 0W25	31595565
RH 26	R CARF RAD 33K 5% 0W25	31630036
RH 27	R CARF AX 4M7 5% 0W25	31660029
RH 28, 33	R COMP AX 1K5 0W50	31594639
RH 31	R SMD 68R 0W10	31425876
RH 36	R SMD 100K 0W10	31425844
RH 37	R SMD 2K2 0W10	31425828
RH 38	R SMD 470R 0W10	31425817
RH 39, 59	R SMD 1K0 0W10	31425820
RH 40	R SMD 100R 0W10	31425852
J 19	R CARF AX 270R 5% 0W25	31660011
J 22	R SMD 0R 0W10	31425802
CAPACITORS		
CH 1	C ECAP RAD 47U 16V	34223251
CH 2, 3, 7, 8, 12, 13	C CER2 SMD 22N 50V	32536221
CH 4, 9, 14, 19	C (M)KT RAD 22N 250V 4X8	33380002
CH 5	C CER1 SMD 68P 50V	32125516
CH 6, 11, 16	C CER2 SMD 1N0 50V	32536203
CH 17	C ECAP BLK 4U7 250V HV	34610001
CH 18	C ECAP BLK 10U 250V HV	34610002
CH 22	C (M)KT BLK 8N2 1K5V	33360007
CH 27, 43	C ECAP RAD 10U 63V	34540025
CH 28	C ECAP RAD 100U 25V	34540020
CH 46	C CER2 SMD 4N7 50V	32536210
TRANSISTORS		
TH 1	TR NPN RAD BF422 250V	36125217
TH 2	TR PNP SMD BC857B 45V	36145412
DIODES		
DH 1, 2	DI RECT PWR AX BYV36C 600V	36575452
DH 3, 4, 5	DIODE SMD BAS16 75V	36560318
DH 6, 7, 8	DI SMD BAV103 200V 250mA	36561950
ZENERS		
ZDH 1	Z DIODE SMD BZV55C 22V 5%	36780015
INTEGRATED CIRCUITS		
ICH 1, 2, 3	IC VIDEO TDA6111Q-N4C DBS9MP	37440004
COILS		
LH 1	COIL AX 10UH 10% 230mA	45620003
LH 6	COIL AX 10uH 1200mA	45571698
OTHERS		
CRT 1, 2	BLADE CONN 2.8MM FOR PCB MALE	41930001
S 1	SPARK GAP 2,0kV +/-500V	41555001
SOH 1⚠	CRT SOCKET 0330 5500 34	41554034
UG 2	BLADE CONN 2.8MM FOR PCB MALE	41930001
XH 1	WIRE BUNDLE 6-PIN 370mm	96010019
XH 2	RGB CABLE 10-PIN	96010198
	PT-SCREW 3,5x6,5 POZ DIN7981	62038859
J 4, 18, 24, 29, 30, 31	JUMPER R=10,0 mm	85600061
J 17, 20	JUMPER R=12,5 mm	85600078
J 21, 25, 27, 28, 32	JUMPER R=7,5 mm	85600054

PP100 Twin tuner pip module

Item	Description	Order no.
RESISTORS		
RPP 3, 8, 24, 26, 41, 42, 43, 44, 47	R SMD 10K 0W10	31425833
RPP 5, 6	R SMD 270R 0W10	31425855
RPP 7, 22, 25, 30, 31, 32, 45, 48	R SMD 100K 0W10	31425844
RPP 10	R SMD 330R 0W10	31425857
RPP 11	R SMD 150R 0W10	31425812
RPP 12, 13	R SMD 22K 0W10	31425837
RPP 14, 16, 27, 28, 29, 50	R SMD 470R 0W10	31425817
RPP 15	R SMD 12K 0W10	31425834
RPP 17	R SMD 1K0 0W10	31425820
RPP 18, 20	R SMD 33K 0W10	31425840
RPP 19, 40, 46	R SMD 100R 0W10	31425852
RPP 21, 23, 38	R SMD 180K 0W10	31490012
RPP 33	R SMD 680K 0W10	31490059
RPP 34	R SMD 56K 0W10	31425842
RPP 35	R SMD 27K 0W10	31425839
RPP 36, 37	R SMD 1M0 0W10	31425801
RPP 39	R SMD 5K6 0W10	31425825
RPP 49	R SMD 6K8 0W10	31425831
CAPACITORS		
CPP 1, 2, 12, 16, 22, 34, 35, 36	C CER2 SMD 100N 25V	32190001
CPP 3, 4, 20	C CER1 SMD 18P 50V	32125520
CPP 5, 8, 23, 24, 25, 26, 27, 28	C ECAP RAD 22U 35V	34540021
CPP 6	C CER2 SMD 22N 25V	32525705
CPP 7	C ECAP RAD 4U7 63V	34540024
CPP 9	C ECAP RAD 2U2 63V	34540023
CPP 10, 14	C ECAP RAD 1U0 63V	34540022
CPP 11, 18, 31	C CER2 SMD 10N 50V	32536213
CPP 13	C CER2 SMD 4N7 50V	32536210
CPP 15, 17	C CER2 SMD 1U0 10V	32525907
CPP 19	C ECAP RAD 100U 16V	34223252
CPP 21	C ECAP RAD 47U 16V	34223251
CPP 32, 33	C CER1 SMD 2N250V	32190026
TRANSISTORS		
TPP 1	TR NPN SMD BC847B 45V	36145312
TPP 2, 3, 4, 5	N-FET SMD 2N7002 60V	36380002
TTP 6	TR NPN SMD BC847B 45V	36145312

Item	Description	Order no.
DIODES		
DPP 1, 2	DI SMD LL4148 75V 200mA	36560311
INTEGRATED CIRCUITS		
ICPP 1	IC V-REG L78M08CV 8V 0.5A	37460003
ICPP 2	IC VIDEO SMD TDA6930X28	37450009
ICPP 3, 4	IC OPAMP SMD TL082CD 8	37470003
COILS		
LPP 1, 2	COIL BLK 10uH 1200mA RAD	45571699
LPP 3	COIL ADJ 150nH 5KM-series	45530020
LPP 4, 5, 6	COIL SMD 10uH 15mA	45640026
FILTERS		
ZPP 1	SAW FILTER OFW G3962M BG	45740003
ZPP 2	FIL CER BLK TPS 5.5 MB	45558410
OTHERS		
	ANTENNA CABLE ASSY 80mm IEC	47780006
J 1, 11	JUMPER R=15,0 mm	85600085
J 2, 3, 12	JUMPER R=20,0 mm	85600102
J 4, 5, 8, 9	JUMPER R=10,0 mm	85600061
J 6, 7, 10, 13, 14	R SMD 0R 0W10	31425802
TU 1	TUNER 4702PH5	58231040
X 1, 2	CONN MODULE 7-PIN	41720049
X 3	CONN RCA VERT JPJ1043-01-231	41910019

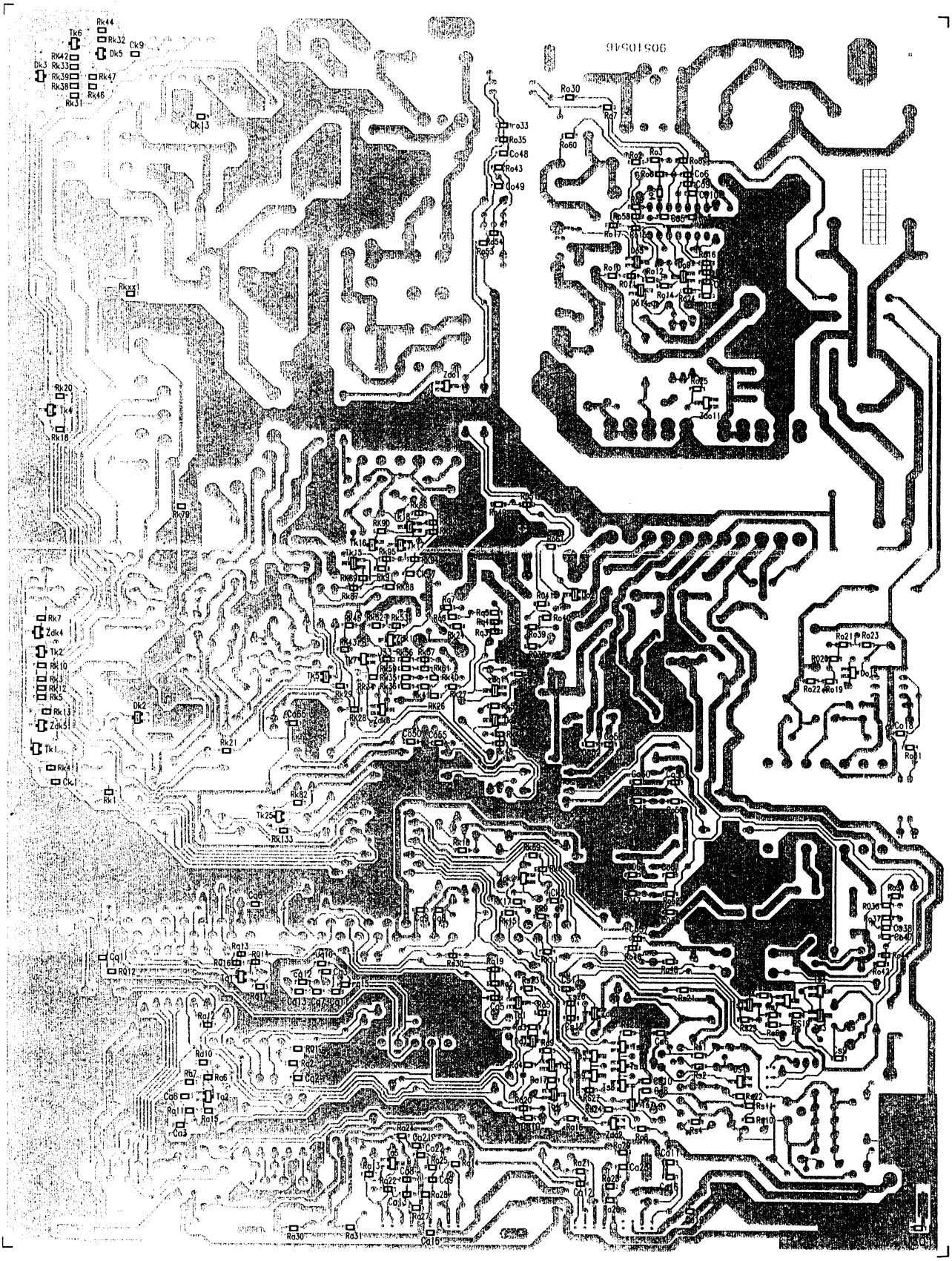


◇ Criplet 1,9mm
◇ Criplet 1,3mm ⚠

VERSION 6

TX/TZ CHASSIS
MC2A SERIES
100Hz

66119673



AV***** (AV100)
(SIGNAL MODULE)

SUBWOOFER * *

MSP341XG

MC33078
HP-AMP

NVM
32k

uP
SDA30C264

EPROM

TEA 6417
VIDEO
MATRIX

VPC323X

LUMA-BUS

CHROMA-BUS

SDA9400

TEXT
SDA5275-3P
RGBFb

DRAM

SDA9489
(PIP)

DDP3310B

E1

E2

E3

XAV4

XAV5

XAV6

XAV7

EXT

L/R IN

XAV8

XAH1

HH
(CRT

VERT.DEFL.COIL

16:9
PICTURE TILT

N ISOLATED

MAINS ISOLATED

Video signal (CVBS or Y)
Chroma signal
Sound IF signal
Audio signal (L)
Audio signal (R)
Subwoofer signal
RGB or UV signal
Horizontal deflection signal
Vertical deflection signal
E-W raster correction signal

* not used
** version component
⚠ safety component, must be replaced only with original parts.

** TU1 4006FH5 (BG)
4046FM5 (Multinorm)

PP100
(TWIN TUNER PICTURE IN PICTURE MODULE)

TA100
(AUDIO LINE OUTPUT MODULE)

FC100
(CONTROL UNIT MODULE)

MAINS NON ISOLATED

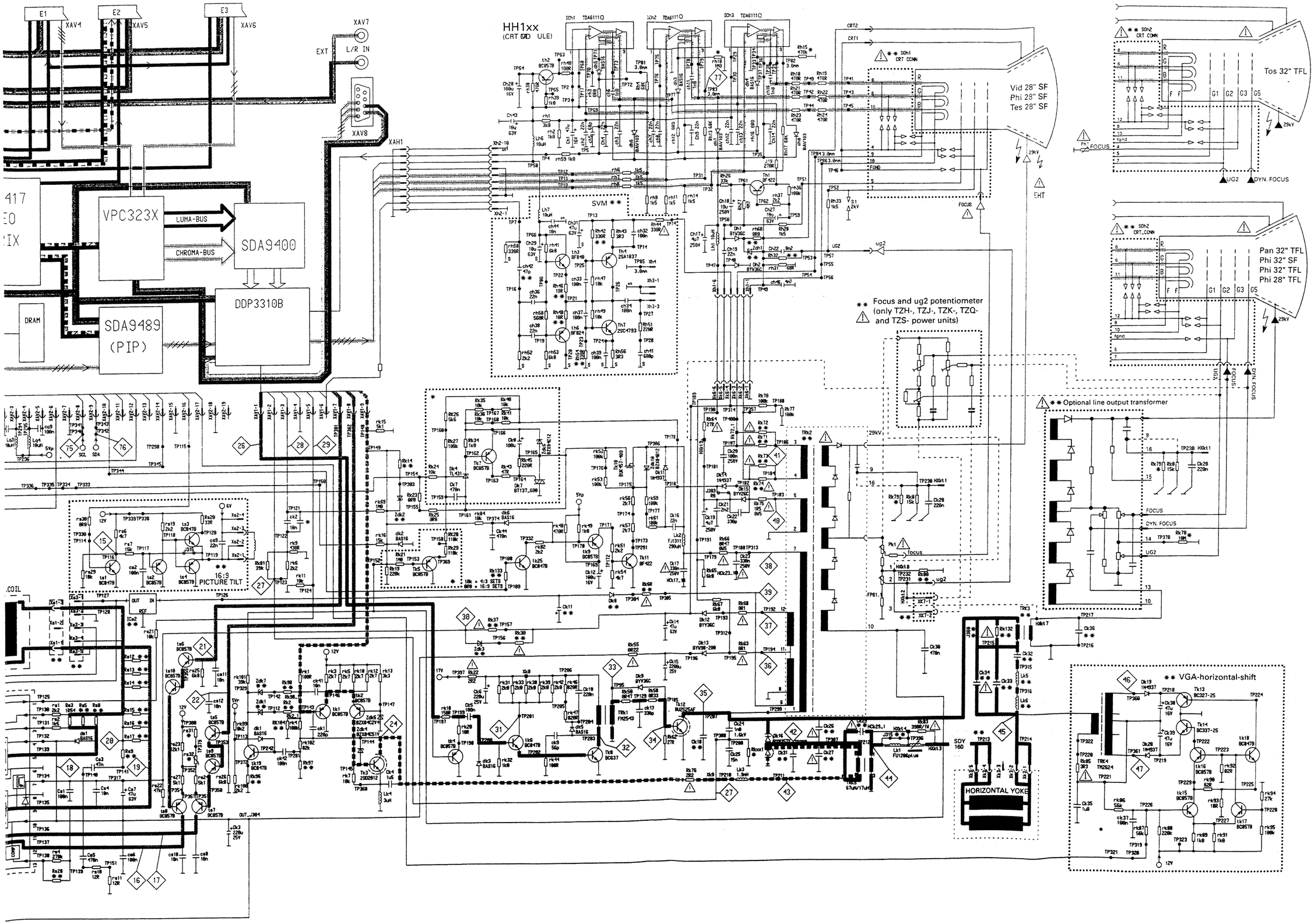
MAINS ISOLATED

MAINS NON ISOLATED

VERSION 9

CHASSIS MC2A SERIES 100Hz

66117304



HH1xx
(CRT OD ULE)
VPC323X
LUMA-BUS
CHROMA-BUS
SDA9400
DDP3310B
SDA9489
(PIP)
DRAM
Vid 28" SF
Phi 28" SF
Tes 28" SF
Tos 32" TFL
Pan 32" TFL
Phi 32" SF
Phi 32" TFL
Phi 28" TFL
** Focus and ug2 potentiometer
(only TZH-, TZJ-, TZK-, TZQ-
and TZS- power units)
** Optional line output transformer
** VGA-horizontal-shift
HORIZONTAL YOKE
16:9
PICTURE TILT
SVM **

TP1
100V/div 2ms/div
200V

TP10
20V/div 5µs/div
0V

TP2
100V/div 2ms/div
200V

TP11 cvbs
500mV/div 10µs/div
2V

TP3
100V/div 5µs/div
300V

TP4
100V/div 5µs/div
300V

TP5
2V/div 5µs/div
6V

TP6
500mV/div 5µs/div
2V

TP7
500mV/div 5µs/div
2V

TP8
1V/div 5µs/div
2V

TP9
200mV/div 5µs/div
0V

TP12 pap Cvbs
200mV/div 10µs/div
800mV

TP24 2V
5V/div 2ms/div
15V

TP34 2H
5V/div 10µs/div
0V

TP42b 2H
50V/div 10µs/div
100V

TP76 SDA
1V/div 50µs/div
3V

TP15 2H
2V/div 20µs/div
4V

TP26 2H
1V/div 10µs/div
2,5V

TP35 2H
200V/div 10µs/div
400V

TP43a 2V
50V/div 2ms/div
100V

TP77 2H
20V/div 5µs/div
130V

TP16 2V
200mV/div 2ms/div
700mV

TP27 2H
10V/div 10µs/div
10V

TP36 2H
50V/div 10µs/div
0V

TP43b 2H
50V/div 10µs/div
100V

TP17 2V
200mV/div 2ms/div
700mV

TP28 2H
1V/div 10µs/div
3V

TP37 2H
100V/div 10µs/div
-200V

TP44a 2V
20V/div 2ms/div
40V

TP18 2V
2V/div 2ms/div
14,5V

TP29 2V
500mV/div 2ms/div
1,5V

TP38 2H
20V/div 10µs/div
120V

TP44b 2H
20V/div 10µs/div
40V

TP19 2V
10V/div 2ms/div
20V

TP30 2V
5V/div 2ms/div
37V

TP39 2H
20V/div 10µs/div
40V

TP45 2H
200V/div 10µs/div
400V

TP20 2V
2V/div 2ms/div
4V

TP31 2H
5V/div 10µs/div
10V

TP40 2H
50V/div 10µs/div
100V

TP46 2H
10V/div 10µs/div
0V

TP21 2V
500mV/div 2ms/div
1,5V

TP32 2H
10V/div 10µs/div
20V

TP41 2H
5V/div 10µs/div
15V

TP47
10mV/div 10µs/div
10V

TP22 2V
500mV/div 2ms/div
1,5V

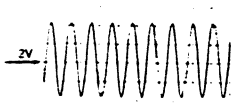
TP33 2H
5V/div 10µs/div
0V

TP42a 2V
50V/div 2ms/div
100V

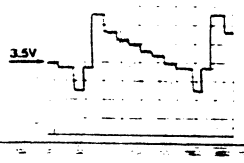
TP75 SCL
1V/div 50µs/div
3V

TP49 FM - Ncam
200mV/div 2µs/div

TP52 MSP Xtal
1V/div 50ns/div



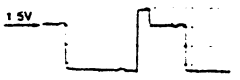
TP53 Scart2 Y out (copy from S-VHS)
500mV/div 10µs/div



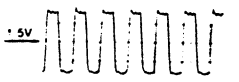
TP54 Scart2 C out (copy from S-VHS)
500mV/div 10µs/div

TP56 C on VPC
500mV/div 10µs/div

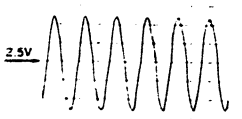
TP59 Scart G on rs VPC
200mV/div 10µs/div



TP60 VPC clk out 13.5MHz
1V/div 50ns/div

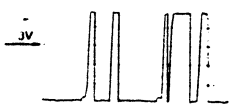


TP74 pros clk 12 MHz
1V/div 50ns/div



TP75 SCL
1V/div 50µs/div

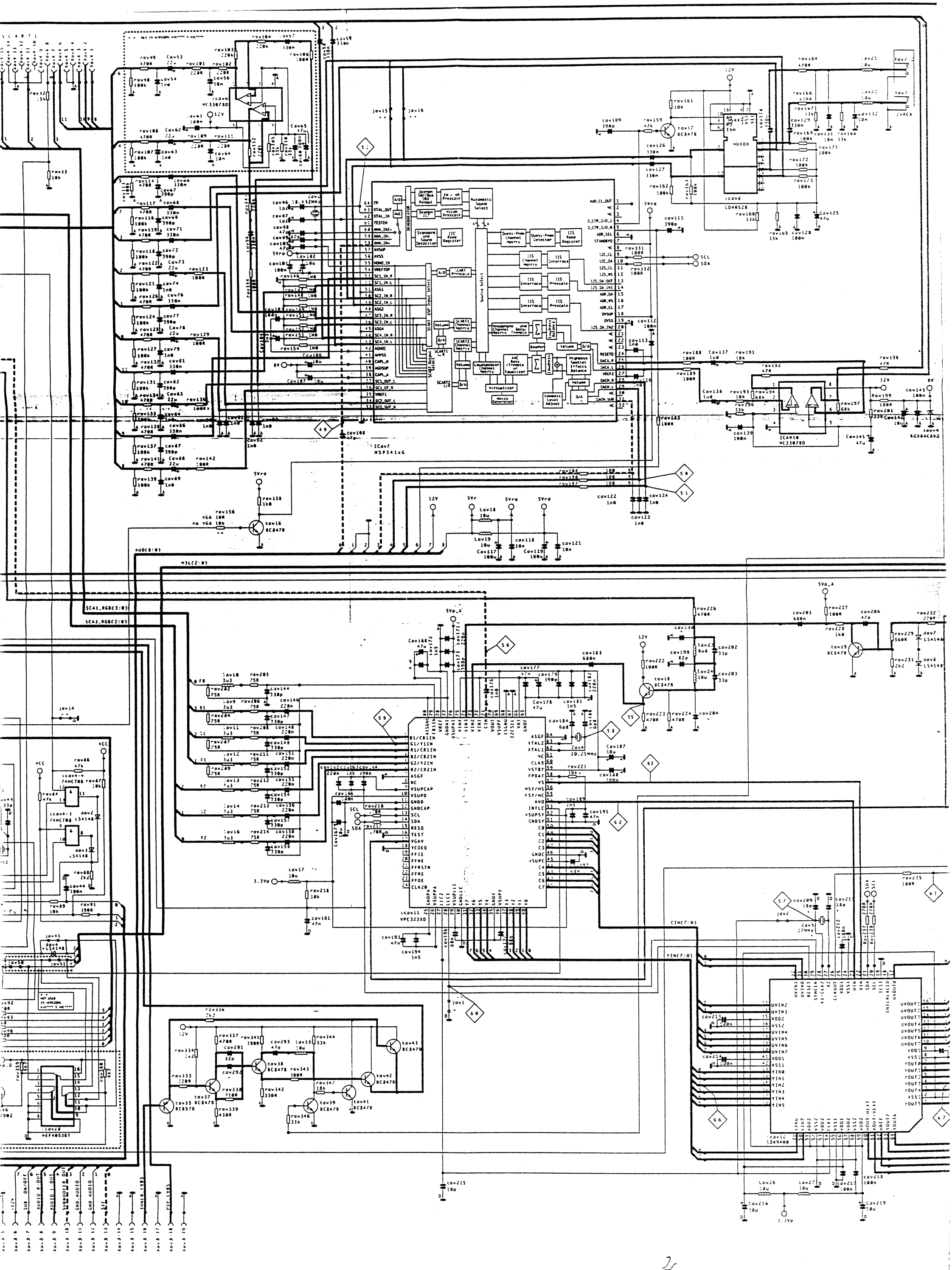
TP76 SDA
1V/div 50µs/div

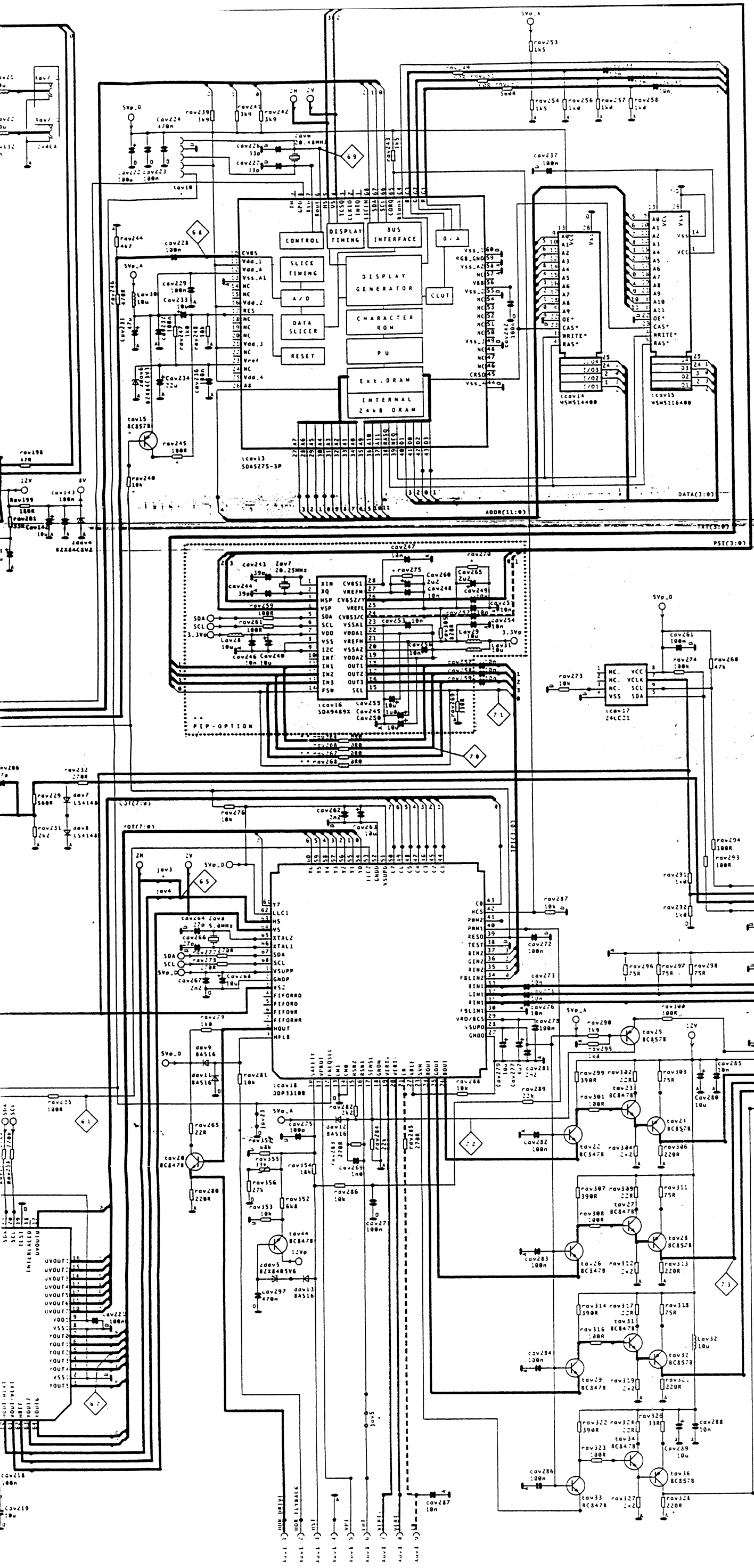


VERSION 9 / 10

SIGNAL MODULE
AV***** (AV100)
MC2A SERIES

66119686


MSP341xG
ICav7
ICAV10
WC330780
HEF4053BT
VPC3230
SDA9400
CD4052B
MUXDX
AUD(8:0)
M3L(2:0)
SCA1_RGB(3:0)
SCA3_RGB(2:0)
CIN(7:0)
YIN(7:0)
SCL
SDA
12V
5Vrd
5Vra
5Vr
5Vp_A
8V
3.3Va
20.25MHz
27MHz
VGA
no VGA
SUB ON/OFF
AUDIO R-OUT
AUDIO L-OUT
SUBWOOFER OUT
GND_AUDIO
GND AUDIO
LUMA (YBS)
CHR (YBS)



TP50 L 3kHz
500mV/div 500µs/div

TP66 Y2
1V/div 10µs/div

TP51 R 1kHz
500mV/div 500µs/div

TP67 Y2
1V/div 10µs/div

TP55 Y in VPC
200mV/div 10µs/div

TP68 Txt Cvbs
500mV/div 10µs/div

TP57 VPC clk out 27 MHz
1V/div 20ns/div

TP69 Txt Xtal
500mV/div 50ns/div

TP58 VPC Xtal
1V/div 20ns/div

TP70 Txt G (menu)
200mV/div 2ms/div

TP61 Scara out clk 27MHz
1V/div 20ns/div

TP71 Txt blank (menu)
500mV/div 2ms/div

TP62 H
1V/div 20µs/div

TP72
500mV/div 50µs/div

TP63 V
1V/div 5ms/div

TP73
1V/div 5µs/div

TP65 H
1V/div 20µs/div

* not used
** version component
⚠ safety component, must be replaced only with original parts.

Video signal (CVBS or Y)
Chroma signal
Sound IF signal
Audio signal (L)
Audio signal (R)
Subwoofer signal
RGB or UV signal
Horizontal deflection signal
Vertical deflection signal
E-W raster correction signal